

CORPUS  
OF  
**MAYA**  
HIEROGLYPHIC  
INSCRIPTIONS

*Volume 1 Introduction to the Corpus*

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## Introduction to the Corpus

By choosing for this work the title *Corpus*, rather than *Collection* or even *Sylloge*, homage is done to August Boeckh, the pioneer who initiated in 1828 the great *Corpus Inscriptionum Graecarum*; today, volumes in the series that stemmed directly from it still continue to appear, nearly one hundred and fifty years later.

Our title sounds an echo, too, of Sylvanus Morley, another tireless compiler, who had without doubt the *C.I.G.* in mind when he called his mimeographed checklist of inscriptions the *Corpus Inscriptionum Mayarum*.

In the present work, Latin has been abandoned even for the title, but makes an appearance in the dedication: for I have borrowed a phrase of Boeckh's, one that he applied to F. A. Wolf, his revered mentor.

Although completion of this *Corpus* is anticipated in something less than a century, the enterprise is still grandly conceived, and honor is due to the man primarily responsible for its inception, Edgar H. Brenner. In 1968 Mr. Brenner, a lawyer and amateur of Maya studies, was able to persuade the Stella and Charles Guttman Foundation of New York City, of which he was a trustee, to commission a preliminary study that called for recommendations as to the form, content, and technical methods to be employed in compiling a *Corpus*, and an estimate of the magnitude of the undertaking.

The task of administering this pilot study was taken up by the Center for Inter-American Relations of New York City, which appointed an Advisory Committee for the purpose. In the course of its existence this committee was served by the following members: Dr. Ignacio Bernal, then director of the Instituto Nacional de Antropología e Historia, Mexico; Mr. Edgar H. Brenner, Stella and Charles Guttman Foundation; Mr. Stanton L. Catlin, Center for Inter-American Relations; Dr. Michael D. Coe, Yale University; Dr. Gordon F. Ekholm, American Museum of Natural History; Dr. Luis Luján Muñoz, director, Instituto Nacional de Antropología e Historia, Guatemala; Dr. Floyd Lounsbury, Yale University; Miss Tatiana Proskouriakoff and Dr. Gordon R. Willey, of the Peabody Museum, and Dr. Stephen Williams, its director.

It was then my good fortune to be asked by the committee to undertake this study. Having completed it, I delivered my report in September, 1969. Early in 1970 the question of an institutional base was resolved when the Peabody Museum offered to take on responsibility for the project. It was a most satisfactory arrangement, in view of the unrivaled photographic archives of Maya sculpture that are preserved in the Museum, incorporating as they do those of the old Department of Archaeology of the Carnegie Institution of Washington.

The Guttman Foundation having pledged further support, an application for matching funds was forwarded to the National Endowment for the Humanities. This was granted for the years 1971 and 1972. At this stage Dr. Eric von Euw joined the project and began his initiation into the twin mysteries of hieroglyphics and the management of mules.

And now, as publication of the *Corpus* begins, there are features of its design and execution that I wish to describe. Those meaning to make use of the work may be anxious to know what its scope will be, how it is organized, and what techniques and standards have been adopted. These are not necessarily self-evident.

**SCOPE** This can be stated quite briefly. First, as to the media in which Maya texts are preserved, all of them except codices and pottery vessels are taken to fall within the purview of the *Corpus*. Thus, inscriptions on jade, shell, bone, wood, stucco, and painted walls will be covered, in addition to those carved in stone, which form the largest category.

Second, no precise geographical limits have been set; any object that carries writing of predominantly Maya character comes within the scope of the *Corpus*.

Third, where hieroglyphs are accompanied by representational art, or accompany it, the entire design will be recorded. In a very few cases an object that bears no inscription will be included: one member of a set of lintels, for example, when other members of the set do carry inscriptions.

We do not propose to offer any commentary on the inscriptions, since to embark on even the barest analysis would seriously hold back progress of fieldwork and publication. Other factors weighed in this decision have been the increase in bulk and in price that a commentary would impose on these volumes, and the reflection that a large proportion of this additional matter inevitably would grow obsolete and become an encumbrance in a still vital work of reference.

It is not our intention, either, to include within these volumes any account of the minor excavations that are occasionally necessary in recording a monument, nor will there be notes on architecture or sherd collections gathered during our work at the various sites. These will appear in another place.

#### DESIGN

A suggestion made by Mr. Brenner at an early stage was for a loose-leaf *Corpus*. This would allow the user to bring together all the pages concerning a single site, some of which might, for various reasons, have had to be issued over a span of years, scattered therefore among several volumes. The possibility also of extracting pages out of their binders for use in a particular study would be of further help to the user, by enabling him to eliminate from his desk an unwieldy pile of books.

It was agreed that this idea was likely to offer real benefits, especially to individual owners of the work (for we rather doubt that librarians will warm to a loose-leaf publication in several volumes). Thus the *Corpus* is designed for alternative forms of use. As issued, the pages are bound; but the binding can be cut off and the leaves kept in spring binders if this is preferred.

The decision to offer this option has imposed certain features on the design. The most important is the allocation of two pages, the recto and verso of one leaf, to each monument or other object. In some cases more than one leaf will have to be assigned to a monument. Had only a permanent binding been in prospect, then it would have been logical to use pairs of facing pages, placing the photographs on one and the drawings on the other. As it is, it will be seen that in most of the layouts a photograph and the drawing corresponding to it are printed on the same page, as it is most important to permit easy comparison of the two.

The large page size was dictated by the decision to accommodate the photographs of all monuments, save the most exceptionally tall stelae, at a fixed scale of 1:10 without resorting to foldouts; also by the need, just mentioned, to fit pairs of drawings and photographs side by side on the page — again, with some unavoidable exceptions.

At the head of each page two numbers will be found, printed in Arabic numerals and separated by a colon. These will be the numbers to cite in references. Here it is opportune to suggest that in all references to the *Corpus*, the compilers' names be omitted and the abbreviation CMHI be used, followed directly by the complete page number, and without date.

The method by which the owner of loose leaves arranges them is for him to decide: sites can be grouped alphabetically, by geographical areas, or by any other criterion. For this mode of use, each leaf is identified by the code printed above the page number; this consists of the abbreviated site name, followed either by Roman numerals for the preliminary matter, map, site plan, etc., or by the monument or object designation. The method of finding a loose leaf from a volume-and-page reference is described in a note below.<sup>1</sup>

In composition, many of these volumes will be somewhat variegated:

unavoidably so, unless the beginning of publication were to be delayed until the entire field program was completed. Ideally, each volume would consist wholly of monuments from one large site or would provide complete coverage of smaller sites within a well-defined area. Not many volumes, perhaps, will approach this ideal, but in none shall we veer to the opposite extreme of offering a miscellany of material that chances to be ready.

All volumes with the exception of the present one will be issued in three parts, or fascicles. By this means we hope to avoid the delays that might otherwise be engendered by the need to accumulate enough material from one geographical area to complete a whole volume; flexibility in planning field operations is in the same degree preserved. For our plan is to concentrate, in each of these volumes, upon one of five sectors of the Maya area, namely Yucatan, Central Lowlands, Chiapas and Usumacinta River, Highlands and Pacific Coast, and Lower Motagua Drainage. Volumes devoted to these areas will not appear in any regular sequence. Within a volume, the coverage of each fascicle will be more narrowly confined to subareas such as the Río de la Pasión drainage, or northwestern Yucatan.

One modest service which the *Corpus* may perform is to bring uniformity to the nomenclature of glyph-blocks, and monuments. I would have added: site names too, if there had been any hope of settling at one stroke all of those more controversial questions such as the name most properly applied to a site (Moral or Morales; Benque Viejo or Xunantunich), or even the best spelling.<sup>2</sup> As to glyph-blocks, the general policy will be to letter and number each one, as far as possible in conformity with existing nomenclature; an abbreviated form of reference to all monument types and sites will also be suggested.<sup>3</sup> We hope that this compact terminology may be found convenient for use in tabulations. The names of all sites with inscriptions on stone have been reduced to three-letter codes; these and abbreviations for monument types are listed in appendix A. A monument can thus be specified by citing the code in capital letters followed by a colon, next the suggested abbreviation for the monument type followed by a period, and lastly the number of the monument. This may be followed, after a comma, by the glyph-block designation; for example, YAX:Lnt.48,A1-B2.

A listing of sites and their codes will be found in appendix A. It will be reprinted with any necessary additions in every third volume, together with an index covering that volume and all those preceding. Objects lacking provenience are numbered in a separate class, "Collections," and such pieces will be placed in fascicles that seem appropriate to them on the basis of likely origin.

Although the scale of reproduction for the principal photograph of the entire object will be with very few exceptions 1:10, and usually the same for the drawing, for sculpture having very fine detail, or glyphs of small size, the scale of the drawing will be increased. For the epigrapher, one of the advantages of line drawings is that clear photocopies of them are easily made which may then be cut up and rearranged at will; they are less satisfactory, however, when the glyph-blocks come out less than one or one-and-a-half centimeters in height. As an extreme case, the hieroglyphs on Lintel 2 from Piedras Negras may be cited, which if reproduced at 1:10 would measure 2.8 by 3.4 millimeters.

Since the beginning of the project three guiding principles have been regarded as dominant: accuracy, clarity, and comprehensiveness. It soon became apparent that the difficulties standing in the way of meeting these objectives are very unequal. Comprehensive coverage depends on continuing financial support more than on any other factor; clarity can be ensured through the use of good photographic technique and the preparation of line drawings; the crucial difficulty is presented by the third objective, accuracy. Here one is compelled to recognize that there is no possibility of

attaining perfect accuracy in transcribing our material, and this fact should be stressed. But accuracy does remain the goal that one constantly strives to approach.<sup>4</sup>

As the first step in this approach, the decision was made to eschew, as much too perilous, all attempts to restore worn or missing areas of sculpture. This is best left to the reader. Yet it would be a mistake to suppose that by confining one's attention to that which still exists, the process of selection or discrimination has been eliminated. Far from it; just as correct delineation of surviving traces of relief in a sculpture is an obvious requirement, so too is omission of all elements that owe their existence to quirks of erosion. Here discrimination is called for, and the recurring necessity of distinguishing between the authentic and the accidental, or spurious, soon forces those engaged in recording weathered inscriptions to acknowledge their near-illiteracy in hieroglyphics as a severe handicap. Study of faint lines on a pitted surface, or a pattern of eroded hollows, summons up half unconsciously a review of known glyphs before the mind's eye in the quest of an identification. All too often there is failure to recognize any known design, least of all one that lends reassurance by being known to fit the context. And yet there remains always the possibility that in the light of future research the same blurred details may provide a reading that will seem by then quite obvious. It is therefore imperative to record all such weathered hieroglyphs as effectively as possible.<sup>5</sup>

The certain knowledge that our record will be flawed by many errors makes us, we confess, uncomfortably conscious of responsibilities. But we hasten to disclaim definitive status for these drawings; they are no more than convenient guides, and the epigrapher is not obliged in the last resort to depend on them. The photographs and drawings published here are not presented on a take-it-or-leave-it basis; instead, like the tip of an iceberg, they are supported by a submerged mass of unpublished data that is accumulating in the Peabody Museum, available to those who have specific points to clarify. We regard formation of this archive as a goal no less important than that of publishing printed volumes.

#### DIMENSIONS

The scheme of measurements given for stelae and the abbreviated notation employed in stating all dimensions are explained in appendix B. The scope of this information may be thought meager; scarcely more ambitious indeed than that of Wordsworth, in his report on a small excavation in *The Thorn* (1798 edition): "I've measured it from side to side / 'Tis three feet long, and two feet wide."

#### MAPS AND PLANS

Since the location of most Maya sites is not known with any precision at the time of writing, it does not seem appropriate at this stage to publish a map of the whole Maya area marking the sites. However, during their visits to each site the compilers invariably attempt to establish its true location, and this will be shown on the map to be found in the introductory pages for that site.<sup>6</sup> These maps are all drawn at the scale of 1:125,000; possibly this scale will seem outlandish to professional cartographers, but it has the advantage of facilitating the transfer of a given location onto the official maps of Mexico, Guatemala, and Belize. These are either at 1:250,000 (Guatemala and Belize) or 1:500,000 (Mexico), so that it is only necessary to measure the intercepts of the site from the given meridian and parallel of latitude, and halve or quarter them as the case may be, to plot it on those smaller-scale maps.

A scale of 1:2,000 has been chosen for site plans. Whenever accurate plans are already available they will be republished, sometimes redrafted, and if necessary simplified or reduced in coverage. But in most cases plans will have been drawn from compass-and-tape surveys made expressly by the compilers, supplemented occasionally by data from plans published by

other workers. Readers do not, perhaps, require warning that a high degree of accuracy should not be expected in such plans, as the primary purpose of our undertaking—gathering inscriptions before they wilt—precludes us from devoting weeks or months to the careful survey of large sites. The most obvious reflection of these economies in effort shows in the substitution of true contours by form-lines that merely give an impression of the terrain.

The symbols employed in maps and plans are given in appendix B.

#### BIBLIOGRAPHY

The number of references to other works that will be made in these volumes is expected to be quite small. This being so, and in view of the progressive and necessarily disordered sequence of publication and the alternative systems of binding that are proposed, the problem of where to locate bibliographic references that occur on pages devoted to monuments is best solved by placing them on the same page, either in the text itself, or as footnotes. On these pages mention of Maler, Morley, and Maudslay will usually not be supported by bibliographic references when the passages concerned are to be found in the Peabody Museum *Memoirs*, the *Inscriptions of Peten*, and the *Biologia Centrali-Americanus*, in the section of the work devoted to the monument concerned, that is to say, in the most obvious place.

#### NOTES

1. It is recommended that those who have opted for loose-leaf usage keep a separate binder for the tables of contents and indexes of all volumes and the most recently issued list of site-codes. If a volume-and-page reference is to be looked up, it will be simple to identify the site and object from the tables of contents and then to find the page in whichever binder the material from that site has been assembled.

At Chichen Itza, the majority of inscriptions are designated by descriptive names—Casa Colorada, Temple of the Four Lintels, etc.—and in varying degrees the same is true of some other sites. These do not fall into any natural order, as do monuments at sites where only stelae and altars are to be found, all in numbered series. If, then, we are to avoid confusion and waste of time in searching for a particular page, a filing order must be established for the monuments of every site. This is provided by the Register of Inscriptions that comes at the end of the introductory matter for each site.

2. In choosing between alternative names or spellings, preference has usually been given to the more commonly accepted form, rather than versions that might be pedantically correct. Thus, Seibal with *ans* is retained, as established in the literature too firmly for change at this late date. In any case, by the rules of Spanish orthography this spelling ought not to be objectionable for a word of Caribbean origin, and it is in fact employed in the place names Seiba Mocha, Cuba, and Seiba Playa, Yucatan.

Accents have been omitted from all Maya place names. In many of these names *h* has been retained for aspirates rather than the more guttural Spanish *jota*, unless well-established usage dictates otherwise, as in Kaminaljuyu. The only substantial change concerns the site previously known as Yaltitud. This mistakenly Hispanicized version has been discarded in favor of Yaltutu, a name that can be found for several localities in Peten (apparently it refers to an abundance of freshwater shellfish at those places).

In the designation of glyph-blocks some difficulties arise. One of them is presented by fragmentary sculpture in which the beginning of the text is missing; the normal scheme of letters and numbers cannot be applied, starting from the first surviving glyph, because subsequent discovery of another fragment is likely to make necessary an entirely new designation, and this is at all costs to be avoided. The policy to be followed in the *Corpus* for fragmentary texts of this kind that do not already have an established designation will be to add the letter *p* (for provisional) as a prefix to each column-letter or row-number, if the possibility exists of preceding columns or rows having been lost. Thus, on a fragment that lacks its original left-hand edge, the numbering will begin with *pA1*, *pB1*, etc. If there is doubt only about the original number of rows, as with a full-width lower fragment of an all-glyphic panel, the *p* will precede the number only, in this fashion: *Ap1*, *Bp1*, etc. By this notation the provisional nature of the designation is made clear.

If a revised, but still provisional, glyph-block designation is called for upon the discovery of a further fragment which still does not supply the beginning of the text, it can be distinguished by the use of the letter *q*, instead of *p*.

Another difficulty lies in the implication that an alphabetic and numerical series indicates the correct order of reading. Indeed, more often than not it does. Morley's very serviceable usage was to look for the opening date, begin the lettering with the column in which this statement commenced, and proceed from left to right. However, an isolated panel of glyphs may be a source of difficulty. Sometimes it can be recognized as a continuation of a column that has merely been interrupted by some nonhieroglyphic element of design; in other cases it clearly does not form part of the main text, but could be a caption relating to an ancillary figure or some other kind of subsidiary matter.



Figure 1

To provide for this situation, a scheme has been devised by Linton Satterthwaite, which is being applied where necessary to monuments at Tikal. The main text receives the conventional designation. Subsidiary panels or groups are identified by letters from the end of the alphabet, and glyphs within them are designated in the ordinary way, except that the column-letters A, B, C, etc., are prefixed with the letter given to that group, in lower case. An illustration is provided by Altar 5 at Tikal. Two groups not labeled by Morley (a row and a panel) lie within the encircling glyptic band. These are now designated Panel Y and Panel Z, respectively, and they contain the glyph-blocks yA1-yA4, and zA1, zA2.

Well-conceived though this system of nomenclature clearly is, the compilers of the *Corpus* have decided not to adopt it when it falls to them to label glyph-blocks. The additional complexity, and the danger of erroneously incorporating a group into, or divorcing it from, the main text seem to us to outweigh the advantages. Nevertheless, designations will be applied in such a way that they correspond as far as possible with the apparent order of reading. Users of the *Corpus* are urged to regard these designations in the first instance as *mere locus-indicators* of the blocks in illustrations and then, in each particular case, to decide whether—or to what extent—they are valid guides to the order of reading the contents of the blocks.

3. Unfortunately, codes conforming with any uniform system of site designation (Rowe 1971) could not be employed, principally because the only justification for the codes in this context—their brevity—would be lost, and also because in many cases insufficient geographical data are available. The codes devised here have the great advantage of being derived from the common names of sites, and so are usually easy to recognize. There are a few instances in which “unnatural” code letters have had to be chosen to avoid confusion among similar site names. However, one ambiguous code, YAX, has been allowed to stand for Yaxchilan, in spite of the possibility of mistaking it for Yaxha, on the grounds that the great volume and importance of the sculpture at Yaxchilan justifies the choice for it of the most obvious code.

4. The various techniques and problems of photography will not be discussed here, chiefly because they are not static but evolve from one year to the next. Indeed, I will take the opportunity to express my hope that an improvement will be noticed in the quality of photographs from volume 3 onward, compared with those taken by me for volume 2; if so, this can be attributed to a change in lighting technique. A discussion of the whole subject is contemplated for publication elsewhere. For the moment it should be enough to state that photographs are generally taken by artificial light, arranged to fall from various directions in successive exposures, the lens axis always being kept perpendicular to the sculptured surface.

About the technique of drawing there is perhaps less that can be said, and there is little to be expected in the way of technical developments during the progress of the *Corpus*. But there are comments to make that do have some bearing upon the interpretation of these drawings.

Our drawings are made on Mylar polyester film and are based on tracings from photographs printed at the scale of 1:4 (or larger, when the drawing is to be reproduced at a scale greater than 1:10). For details to be incorporated in the rendering, heavy reliance is placed on pencil drawings that have been made in the presence of the original; these field drawings are always checked over at night with electric light arranged to fall on the stone at raking angles and from various directions in turn, so as to bring up the faintest remains of relief. Figure 1 is presented here to show how different features of a carved surface are revealed by lighting from different directions; also to point up the need to insure a strictly frontal camera position so as to avoid distortion.

Apart from field drawings and photographs, other resources that may be utilized in the rendering include plastercasts, these being especially valuable in the case of a lintel in situ or a sculpture having a curved surface (e.g., Naranjo Stela 35), and old photographs that may show sculptural detail or even whole fragments now lost.

Broadly speaking, there are two ways of representing relief with pen or pencil on paper. One technique aims at lifelike effect, simulating the texture of stone and the play of light upon it by skillful use of stipple or hachure; the other is a line drawing that does not pretend to be more than schematic, suggesting neither plasticity nor tactile value nor illumination from any particular direction. This is the technique adopted for the present work. Besides demanding less artistic talent, the line drawing has the advantage of being able to convey more information in a given area. This is important because in the corpus of Maya sculpture there are pieces so finely carved as to make realistic rendering at a much reduced scale impracticable, if detail is not to be lost. Even in a line drawing, there is difficulty with crosshatched areas in which the lines may be spaced less than two millimeters apart on the original or half a millimeter at drafting scale, and one fifth of a millimeter at reproduction scale.

In the common sort of Maya bas-relief, the convention appears to be that figures stand against a featureless wall, or a clear sky, this being represented by a recessed surface. The background of hieroglyphs, although they may be on a raised panel or isolated in a frame, is likewise plain. Where a glyph is pierced with an opening, this is recessed to the general background level. Thus, a line drawing can be rendered more intelligible if the background is shown stippled. In the *Corpus* the density of stippling is meant to indicate the probability that no feature was ever carved in that area. For example, if in the area surrounding a headdress part of the plain background has been badly pitted, a less dense stippling will be applied there, as the former existence of some detail, such as a pair of incised glyphs or a feather, cannot be ruled out entirely. Additionally, it is a useful feature of the stippled background that it can be made to show the eroded outline of a glyph or other element with any degree of vagueness desired.

Occasionally, difficulties are met with in the application of stippling. The commonest and most serious doubt arises over small recessed areas: do they represent holes in the object portrayed or merely recessed features in it? Where there is uncertainty the stippling is best left out, and the area can be shown as recessed in the following manner: a close look at any stippled background in this work will show that the line enclosing it, which represents a projecting rim of relief, is strengthened with closely spaced dots along the low, or stippled, side. Equally, in the absence of stippling, a similar row of dots touching a line on one side signifies that on that side the surface recedes. This

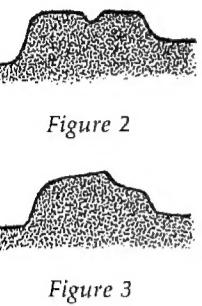


Figure 2



Figure 3

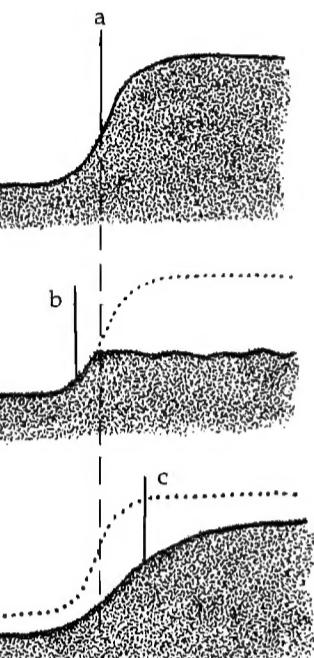


Figure 4

notation, however, will be employed only where doubt is likely to arise over the interpretation of a passage.

As far as possible, the stylistic character of the original is preserved in the line drawing, a conscious effort having been made to suppress any tendency to smooth out erratic curves or eliminate other signs of poor workmanship. However, line drawings are deficient in one important respect, for they do not convey the particular quality of roundness, or lack of it, in the relief. To give an example, the cross section of the cartouche or rim of a glyph is often as demonstrated in figure 2. Certain sculptors, however, rejecting the use of an incised inner line, worked the stone with evident care into another cross section (figure 3). Differentiating between these two in a drawing at small scale, whatever the technique of drawing, would be a test of skill for any draftsman, but in a line drawing the task is plainly impossible. Therefore, information about the quality of relief has to be sought in the photographs (see also note 5).

To represent a line whose course or even existence is uncertain we use a dotted line, with the degree of uncertainty expressed by the spacing of the dots. Solid lines are used only for features about whose form there is no doubt. On the face of it, this is a simple enough principle; but one that can scarcely be maintained rigorously. The draftsman (to his dismay) is repeatedly confronted by evidence of his own overconfidence, the most chastening experience being to finish drawing a rather well-preserved sculpture and then discover an early photograph showing the piece in pristine condition. Many a solid line is found to have minor, but possibly significant, defects.

In order to distinguish between lines that come to a definite end and others that are interrupted by erosion or breakage, the latter are terminated in the drawing by a dot, which may not be noticeable without the use of a magnifying glass.

A minor problem in representing relief sculpture by line drawings is presented by the displacement of lines that erosion can cause. While it would be pretentious to claim that lines are drawn to correspond with any precisely determined point on the shoulder of the relief, it may be said that the point is about halfway up the slope, or a little more. Erosion can cause displacement in either direction. If the raised areas have been preferentially eroded, leaving the recessed background unaffected—this may be the result of flaking or other processes not understood; Naranjo Stela 23 provides a good example—then the foot of the relief will remain perfectly clear, justifying even a solid line in the drawing; but this line will have been displaced outwards (b in figure 4). In contrast, the acid decomposition products of mosses and humus attack stone more evenly, with a consequent shift inwards of the apparent line (c in figure 4). In consequence, a lone feather or other narrow element will show quite distinctly, but it will have suffered considerable attenuation. Perhaps even more noticeable is the gap that develops between elements such as a glyptic mainsign and affixes that once made contact with it.

Dots, represented by drilled holes in sculpture, are a common element in Maya designs and in weathered stone are easily confused with erosion pits. Undoubted dots, then, are represented in these drawings by heavy spots, and doubtful ones by three small dots, whereas a circlet of uncertain authenticity is represented by five or more dots in a circle. An effort is made always to depict the correct number of dots or beads in figurative art and in hieroglyphic affixes such as T-32 or T-36. The number of lines, however, in a crosshatched area is not so carefully reproduced, as being less likely to have significance.

5. Glyphs carved in a fine-grained stone, with interior detail lightly carved or incised, weather down to fairly clear outlines enclosing totally blank interiors. These present no problem of representation. The difficult case is the glyph deeply carved in a stone of coarse and uneven composition. Here, if a significant element is to be recognized among the lumps and hollows largely caused by erosion, that glyph must almost have been expected for that position in the text. Glyph combinations such as Emblem Glyphs, Imix-comb-Imix glyphs, and members of known clauses can often be spotted when neighboring glyphs no worse eroded have to be shown blank in the drawing. In such cases the better prepared epigrapher of the future is likely to feel betrayed by the publication of only a single photograph and a line drawing.

The solution seems to lie in three-dimensional photography. In the first fascicle to be issued, volume 2, part 1, stereophotographs are supplied only for the glyptic panels on the front of Stelae 22 and 23 from Naranjo, but in later volumes they will be more liberally provided. These stereophotographs are meant to be examined with the standard pocket viewer manufactured for use with aerial photographs.

It has been suggested that if stereophotographs are to be taken, then the further step ought to be made up to full photogrammetry. This seems to me a doubtful proposition: the cost of stereo-plotting is very great, and it is not clear in the present context what benefits the technique has to offer—even though claims have been made for it in connection with a problem not encountered in Maya sculpture, the separation of palimpsest inscriptions (Silva and Fernando 1971).

6. Determining the latitude and longitude of ruins in the forest by means of transit and chronometer, as was attempted on Carnegie Institution expeditions in the 1920s and 1930s, is attended with certain difficulties. In those days a source of serious error lay in the chronometer, but this has now been almost eliminated: wristwatches of previously unattainable accuracy are available, and they can be set by time signals received over a portable radio. But another impediment remains. The altitude of the Pole Star is so low in the latitudes of Maya sites that observations are possible only if quite a long clearing exists, extending north and south, or if there is a tall pyramid cleared of trees round the top. In the course of a season's formal excavation at a site, one can sometimes arrange without too much difficulty for one of these conditions to be met, but clearing trees is seldom possible during a visit made for the sole purpose of recording sculpture.

Another method has therefore to be used. Generally the only one that is feasible is to make a ground traverse from a known station, and to correlate the plot later with stereoscopic aerial photographs. Along the trail, compass readings to the nearest five degrees are taken every minute, together with notes of prominent natural features: swamps, escarpments, streams, etc. Traverses recorded on the outward journey can be helpful in navigating towards a particular goal, but they are likely to be less accurate than those taken on the way back, owing to the repeated interruptions of pace that occur when obstructions are met and are cleared away by machete work.

## Introducción al Corpus

After the traverse has been plotted to a scale close to that of the aerial photographs, it will have to be bent a little and stretched here and there so that the streams crossed and escarpments skirted seem to correspond with features seen in the aerial photographs. Then the ruins themselves can usually be pinpointed. The practiced eye is often aided in recognizing ruins by the look of the vegetation around them: the dark patches of breadnut trees (*ramón*), and on the tops of high mounds the pale glistening of fig trees.

The technique has been found quite successful in Petén, failing only in karst terrain where there are scarcely any features other than hills, and these quite indistinguishable in their abundance, either on the ground or in stereoscopic aerial view.

Al escoger el título *Corpus*, en lugar de *Colección* u otro título, se rinde homenaje a August Boeckh, el pionero quien en 1828 inició el gran *Corpus Inscriptionum Graecarum*. Hoy, casi ciento cincuenta años más tarde, continúan siendo publicados volúmenes en la serie que tuvo su origen en esta obra.

El título también recuerda a Sylvanus Morley, otro incansable recopilador, quien sin lugar a dudas tuvo en mente al CIG al titular su mimeografiada lista de inscripciones *Corpus Inscriptionum Mayarum*.

En la presente obra el latín ha sido abandonado en el título, pero aparece en la dedicatoria, porque he apropiado una frase de Boeckh dedicada a F. A. Wolf, su respetado mentor.

Aunque esperamos que la realización de este *Corpus* tome algo menos de un siglo, la obra está ambiciosamente concebida y justo honor se debe a la persona primordialmente responsable por su inicio, el señor Edgar H. Brenner. El Sr. Brenner, abogado y aficionado a los estudios mayas, persuadió en 1968 a la Fundación Stella and Charles Guttman de Nueva York, de la cual es depositario, para que comisionara un estudio preliminar que hiciera recomendaciones en cuanto a la forma, contenido, y métodos técnicos necesarios en la recopilación de un *Corpus* y al mismo tiempo hacer un cálculo sobre la magnitud de la empresa.

La tarea de administrar el estudio piloto fue tomada por el Centro para Relaciones Interamericanas de Nueva York, el cual nombró un comité asesor con tal propósito. En el transcurso de su existencia, el comité estuvo formado por los siguientes miembros: Dr. Ignacio Bernal, en esa época director del Instituto Nacional de Antropología e Historia de México, Sr. Edgar H. Brenner de la Fundación Stella y Charles Guttman, Sr. Stanton L. Catlin, del Centro para Relaciones Interamericanas, Dr. Michael D. Coe, de la Universidad de Yale, Dr. Gordon F. Ekholm, del Museo Americano de Historia Natural, Dr. Luis Luján Muñoz, director del Instituto de Antropología e Historia de Guatemala, Dr. Floyd Lounsbury, de la Universidad de Yale, Sra. Tatiana Proskouriakoff y Dr. Gordon R. Willey del Museo Peabody y Dr. Stephen Williams, director de dicho museo.

Al entregar el autor su reporte al comité, se iniciaron los planes para la producción del *Corpus*. El problema de una base institucional fue resuelto cuando a principios de 1970 el Museo Peabody ofreció tomar la responsabilidad del proyecto. Esto resultó ser el arreglo más adecuado en vista de los incomparables archivos fotográficos de esas culturas mayas que se conservan en el museo, que incluyen los archivos del antiguo Departamento de Arqueología de la Institución Carnegie de Washington.

Habiéndose comprometido la Fundación Guttman a prestar más apoyo económico se solicitó una donación igual a la National Endowment for the Humanities, los cuales fueron concedidos para los años 1971 y 1972. Fue en esta época que el Dr. Eric von Euw se unió al proyecto y se inició en el doble misterio de los jeroglíficos por una parte y por la otra, el manejo de mulas.

Ahora, con el comienzo de la publicación del *Corpus*, existen ciertas formas de diseño y ejecución que me gustaría delinejar. Aquéllos que se proponen hacer uso de esta obra quizás estén ansiosos de saber cuál será su alcance, cómo está organizada y qué técnicas y patrones se han adoptado, ya que éstas no son evidentes por sí mismas.

### ALCANCE

Este puede expresarse succinctamente. Primero: en cuanto a los medios en los cuales se conservan los textos mayas, todos ellos, excepto los códices y la cerámica, quedan dentro de los límites del *Corpus*. Inscripciones en jade, concha, hueso, madera, estuco, y pinturas murales serán incluidas, así como aquéllas talladas en piedra, las cuales forman la mayoría.

Segundo: no se han establecido límites geográficos específicos; cualquier objeto que lleve escritura de caracteres predominantemente mayas cae dentro de la esfera del *Corpus*.

Tercero: cuando los jeroglíficos están acompañados por arte representativo, el diseño completo será registrado. En raras ocasiones un objeto sin inscripciones será incluido, como por ejemplo en el caso de un dintel sin inscripciones que pertenezca a un conjunto cuyos otros miembros tengan jeroglíficos. No nos proponemos ofrecer comentario alguno sobre las inscripciones, pues embarcar aunque fuera en un simple análisis atrasaría seriamente el progreso del trabajo de campo y de publicación. Otros factores considerados en esta decisión son el aumento en tamaño y costo que un comentario impondría sobre estos volúmenes y la reflección de que con el tiempo esta materia adicional inevitablemente se volvería anticuada y llegaría a convertirse en un obstáculo en una obra aún vital como referencia.

Tampoco es nuestra intención incluir en estos volúmenes cualquier relación de las excavaciones menores que son ocasionalmente necesarias al documentar un monumento, ni existirán notas sobre arquitectura o colecciones de tiestos recolectados durante nuestro trabajo en los diversos sitios arqueológicos. Estos se publicarán separadamente.

#### FORMATO

El Sr. Brenner sugirió durante las primeras etapas del proyecto organizar el *Corpus* en hojas sueltas. Esto permitiría a la persona que lo use juntar si prefiere todas las hojas concernientes a un mismo sitio, algunas de las cuales por varias razones serán publicadas a lo largo de varios años y por lo tanto esparcidas en diversos volúmenes. La posibilidad de poder extraer las hojas de los volúmenes para usarlas en determinados estudios ayudaría de otra manera al lector, evitando a cierto grado el desorden ocasionado al tener que trabajar con un número innecesario de libros.

Fue aceptado que tal plan puede ofrecer verdaderos beneficios a los que usen el *Corpus*, particularmente a individuos, ya que dudamos que bibliotecarios encuentren muy agradable el prospecto de varios volúmenes de una publicación en hojas sueltas. Por lo tanto, el *Corpus* ha sido diseñado para varios usos. Al publicarse, las páginas estarán encuadradas, pero éstas podrán ser cortadas y guardadas en carpetas si así se prefiere.

Esta opción ha impuesto ciertos límites en el diseño, siendo el más importante la asignación de dos páginas, el recto y el reverso de una hoja, para cada monumento u objeto (aunque en algunos casos más de una hoja será necesaria para un solo monumento). Si se hubiera considerado sólo un tipo permanente de encuadernación hubiera sido lógico usar pares de páginas, una frente a la otra colocando las fotografías en una página y los dibujos en la otra. Se verá que, como es importante facilitar la comparación entre las fotografías de una pieza y los dibujos correspondientes, en la mayoría de los casos los dos están impresos en la misma hoja.

El tamaño grande de las páginas está subordinado a la decisión de acomodar en ellas las fotografías de todos los monumentos, salvo las estelas excepcionalmente altas, a una escala fija de 1:10 sin tener que usar hojas dobladas, así como por la necesidad ya mencionada de poner pares de dibujos y fotografías lado a lado en la misma página (con algunas inevitables excepciones).

Encabezando cada página aparecerán dos números impresos en caracteres arábigos separados por dos puntos. Estos serán los números que deben citarse en cualquier referencia. Es oportuno sugerir aquí que en toda referencia hecha al *Corpus*, los nombres de los recopiladores, así como la fecha, sean omitidos y la abreviación CMHI sea usada, seguida inmediatamente por el número completo de la página.

La manera en que las hojas sueltas se arreglan se deja a discreción de la persona usando el *Corpus*: los sitios pueden ser agrupados en orden alfabético, por áreas geográficas o usando cualquier otro criterio. Para facilitar este uso del *Corpus* cada hoja está identificada por la clave impresa encima del número de la página; ésta consiste del nombre abreviado del

sitio, seguido por números romanos para la materia preliminar: mapa, plano del sitio, etc. o por la designación del monumento u objeto. El método de encontrar una hoja suelta en una referencia de volumen y página se describe en la nota (1).

El contenido de varios volúmenes será inevitablemente algo heterogéneo pues de lo contrario la publicación se atrasaría hasta que todo el trabajo de campo fuera completado. Idealmente, cada volumen consistiría en su totalidad de monumentos provenientes de un solo sitio arqueológico grande o abarcaría sitios pequeños dentro de un área definida. Quizás no habrán muchos volúmenes que se acerquen a este ideal, pero en ningún caso tomaremos el camino opuesto de ofrecer información miscelánea porque simplemente está ya lista.

Todos los volúmenes excepto el presente serán emitidos en tres partes o entregas. Esperamos así evitar las demoras ocasionadas por la necesidad de acumular suficiente material de un área geográfica para completar un volumen, así como conservar flexibilidad en el trabajo de campo. Nuestro plan es concentrarnos en cada volumen en uno de los cinco sectores del área maya, es decir: Yucatán, Tierras Bajas Centrales, Chiapas y el Río Usumacinta, el Altiplano y la Costa del Pacífico, el Desaguado Inferior del Río Motagua. Los volúmenes dedicados a estas áreas no aparecerán en una secuencia regular; dentro de cada volumen el contenido de una parte será limitada a sub-áreas tales como el Desaguado del Río de la Pasión o el Noroeste de Yucatán.

Un servicio modesto que el *Corpus* puede prestar es el de traer uniformidad a la nomenclatura de bloques jeroglíficos y monumentos. Yo añadiría también los nombres de los sitios arqueológicos si hubiera alguna esperanza de aclarar de una vez por todas las controversias que existen con respecto al nombre más apropiado para varios sitios (Moral o Morales, Benque Viejo o Xunantunich) o quizás aún la mejor forma ortográfica de escribirlo (2). En general el curso de acción en cuanto a los bloques jeroglíficos será el de asignar letras y números a cada uno de ellos, hasta donde sea posible de conformidad con la nomenclatura existente; una forma abreviada de referencia para todos los tipos de monumentos y sitios será también sugerida (3). Esperamos que esta terminología se juzgue conveniente para usar en tabulaciones. Los nombres de todos los sitios con inscripciones en piedra han sido reducidos a claves de tres letras. Estas y abreviaciones para ciertas clases de monumentos se encuentran en el Apéndice "A". Un monumento puede de esta manera ser especificado citando la clave en letras mayúsculas seguida por dos puntos, la abreviación sugerida para el tipo de monumento y un punto final, y por último el número del monumento. Este puede ser seguido después de una coma por la designación del bloque jeroglífico, por ejemplo: YAX: Lnt.48, A1-B2.

La lista de los sitios arqueológicos y sus claves se encuentra en el Apéndice "A". Esta lista será impresa con todas las adiciones necesarias en cada tercer volumen junto con un índice para ese volumen y para todos los volúmenes anteriores. Objetos careciendo de procedencia serán numerados en una clase separada: "Colecciones" y tales piezas serán incluidas en partes que parezcan apropiadas basándose en su probable origen.

Aunque la escala de reproducción para la fotografía principal de un objeto entero será con muy pocas excepciones de 1:10 y normalmente el mismo tamaño para el dibujo, en esculturas con detalles muy finos o con jeroglíficos muy pequeños, la escala del dibujo será aumentada. Para el epigrafista una de las ventajas de hacer dibujos lineales es que fácilmente se hacen photocopies bastante claras que a su vez se pueden cortar y arreglar de cualquier manera; sin embargo, son menos satisfactorias cuando los dibujos de los bloques jeroglíficos son de menos de uno o uno y medio centímetros de altura. Como un caso extremo pueden citarse los jeroglíficos

del Dintel 2 de Piedras Negras, que si se reprodujeran usando la escala de 1:10 medirían 2.8 mm. por 3.4 mm.

Desde su origen tres objetivos se han considerado como los principales del proyecto: exactitud, claridad, y que su alcance sea el más completo posible. Muy pronto se hizo apparente que las dificultades en alcanzar estas metas son bastante desiguales. El alcance depende del continuo soporte económico más que de cualquier otro factor; la claridad puede ser asegurada a través del uso de buenas técnicas fotográficas y la cuidadosa preparación de dibujos lineales; la dificultad crucial se encuentra con el tercer objetivo, exactitud. Aquí uno está comprometido a reconocer que no existe la posibilidad de obtener exactitud completa al transcribir nuestro material y ésto debe ser enfatizado, aunque exactitud se mantiene como la meta que se procura constantemente de alcanzar.

Como primer paso en este camino la decisión fue hecha de evitar (considerándolo como demasiado arriesgado) cualquier intento de restaurar en esculturas áreas gastadas o destruidas. Esto se dejó al criterio del lector. Pero aún así sería un error suponer que limitando la atención a aquello que todavía existe, el proceso de selección o juicio ha sido eliminado. Por el contrario, tanto como la delineación correcta de los trazos de relieve sobrevivientes en una escultura es un requisito obvio, así también es la omisión de todos los elementos que deben su existencia al capricho de la erosión. En este caso, un discernimiento es necesario y la recurrente necesidad de distinguir entre lo auténtico y lo accidental (o espurio) pronto forza a aquellos empeñados en grabar inscripciones gastadas por la intemperie a reconocer su quasi-analfabetismo en jeroglíficos como una severa desventaja. Al estudiar las líneas tenues de una superficie picada o el diseño formado por hoyos en la piedra hace recordar casi inconscientemente jeroglíficos ya conocidos. Demasiadas veces no se encuentra algún diseño conocido y menos aún uno que restablezca la confianza al saber que encaja en el contexto. Sin embargo siempre existe la posibilidad que en luz de futuras investigaciones los mismos detalles borrosos puedan proveer una lectura que aparecerá entonces bastante obvia. Por consiguiente, es imperativo grabar todos los jeroglíficos erosionados tan eficazmente como sea posible (5).

La seguridad de que nuestro registro será imperfecto debido a muchos errores, nos hace incómodamente conscientes de ciertas responsabilidades. Nos apresuramos a renunciar el carácter definitivo de estos dibujos, siendo éstos sólo guías convenientes, no estando el epigrafista obligado en ningún caso a depender de ellos. Las fotografías y dibujos aquí publicados no se presentan en una base de "los toman o los dejan", sino que, como la punta de un iceberg, están sostenidos por una masa sumergida de datos inéditos que se están acumulando en el Museo Peabody y que están al alcance de aquéllos que tengan puntos específicos que clarificar. Nosotros consideramos la formación de este archivo como una meta no menos importante que el de publicar los volúmenes.

#### DIMENSIONES

El sistema de medidas dadas para las estelas y la anotación abreviada que se usa para las dimensiones están explicadas en el Apéndice "B". Es posible que el alcance de esta información se considere pobre y escasamente más ambiciosa que la de Wordsworth, quien en su reporte sobre una pequeña excavación en su poema "La Espina", edición de 1798, escribe: "yo lo he medido de lado a lado/ tiene tres pies de largo y dos pies de ancho."

#### MAPAS Y PLANOS

Como la ubicación de la mayoría de los sitios mayas no se conoce con exactitud, no nos parece apropiado, al empezar esta obra, publicar un mapa de toda el área maya indicando los sitios arqueológicos. Sin embargo, durante las visitas a cada sitio arqueológico los recopiladores invariablemente tratan de establecer su verdadera situación, la cual se

indicará en el mapa que se encuentra en las páginas de introducción para ese lugar (6). Estos mapas están dibujados a una escala de 1:125,000; posiblemente esta escala parezca extraña a cartógrafos profesionales pero tiene la ventaja de facilitar la transferencia de la localidad dada a los mapas oficiales de México, Guatemala, y Belice. Ya que estas escalas son de 1:250,000 (Guatemala y Belice) o de 1:500,000 (Méjico), solamente es necesario medir para un sitio las intercepciones de un meridiano y un paralelo de latitud y sacarle la mitad o la cuarta parte según sea el caso, para proyectarlo en los mapas de escalas más pequeñas.

La escala de 1:2,000 ha sido escogida para planos de los sitios arqueológicos. Cuando existan planos exactos que estén disponibles, éstos serán nuevamente publicados o dibujados y si es necesario simplificados o reducidos en lo que abarcan. Pero en la mayoría de los casos los planos fueron obtenidos a base de mediciones hechas deliberadamente por los recopiladores usando compás y metro, suplementados ocasionalmente por datos de planos publicados por otros trabajadores. Nuestros lectores quizás no requieran advertencia de que la más alta exactitud no debería esperarse en planos hechos de tal manera, ya que el propósito primordial de nuestra empresa—acumular inscripciones antes que desaparezcan—nos evita dedicar semanas o meses a la medición cuidadosa de lugares grandes.

Los símbolos empleados en los mapas y planos aparecen en el Apéndice "B".

#### BIBLIOGRAFIA

Se espera que el número de referencias a otros trabajos hechos en esta publicación será bastante pequeño. En vista de ésto y de la progresiva y desordenada secuencia de publicación, así como los sistemas alternativos de encuadernación que se han propuesto, el problema de colocación de las referencias bibliográficas que ocurren en páginas dedicadas a monumentos, se resuelve mejor colocándolas en la misma plana, en el texto mismo o como notas al pie de la hoja. En estas páginas alusiones a Maler, Morley, y Maudslay no serán sustentadas por referencias bibliográficas, cuando los pasajes concernientes se encuentren en los *Memoirs of the Peabody Museum*, *The Inscriptions of Petén* o *Biología Centrali-Americana*, en la sección del trabajo dedicado al monumento en cuestión, eso es, en el lugar más obvio.

#### NOTAS

1. Se recomienda a aquéllos que han optado por usar las hojas sueltas que mantengan carpetas separadas para las tablas de contenidos e índices de todos los volúmenes y para la lista de claves de los sitios más recientemente publicada. Si se necesita encontrar una referencia hecha a un volumen y a una página, será simple identificar el sitio y el objeto en las tablas de contenidos y luego buscar la hoja en la carpeta en que el material para ese sitio se ha reunido.

En Chichen Itza, la mayor parte de las inscripciones están designadas por nombres descriptivos—Casa Colorada, Templo de los Cuatro Dinteles, etc.—y con algunas variantes lo mismo es cierto en otros sitios. Estos no caen en ningún orden natural, como lo hacen monumentos en sitios donde se encuentran solamente estelas y altares en series numeradas. Si se va a evitar confusión y pérdida de tiempo buscando una página en particular se debe establecer un archivo para los monumentos de cada sitio. Este es proveído por el Registro de Inscripciones que viene al final de la materia de introducción para cada sitio.

2. Al escoger entre nombres alternativos o la mejor ortografía, usualmente se ha dado preferencia a la forma más comúnmente aceptada, en lugar de las versiones que pudieran ser pedantemente correctas. Así Seibal escrita con una 'S' queda retenida, ya que está firmemente establecida en la literatura como para cambiarla. En cualquier caso, de acuerdo con las reglas de ortografía española esta escritura no es objectionable para una palabra de origen caribeño, ya que se emplea en el nombre de lugares como Seiba Mocha, Cuba, y Seiba Playa, Campeche.

Los acentos han sido omitidos en todos los nombres de lugares mayas. En muchos nombres la 'h' ha sido retenida para sonidos aspirados en lugar de la 'j' española, que es más gutural, a menos que un uso bien establecido dicte lo contrario como en el caso de Kaminaljuyu. El único cambio substancial concierne al sitio previamente conocido como Yaltitlán. Esta equivocada versión españolaizada ha sido descartada en favor de Yaltutu, un término usado para nombrar varias localidades en el Petén (aparentemente se refiere a una abundancia de caracoles de agua dulce en esos lugares).



Figura 1

Algunas dificultades aparecen en la designación de bloques de jeroglíficos. Una de ellas está representada por escultura fragmentaria en la cual falta el comienzo del texto. A este bloque no se le puede aplicar el plan normal de letras y números empezando desde el primer jeroglífico sobreviviente, porque el subsecuente descubrimiento de otro fragmento podría requerir una nueva designación, lo cual debe evitarse a todo costo. El curso que seguiremos en el *Corpus* para textos fragmentarios de esta clase y que no tengan una designación establecida, será el de agregarles la letra 'p' (provisional) como prefijo a cada columna-letra o fila-número si existe la posibilidad de que las columnas o filas precedentes se hayan perdido. Así, en un fragmento que carece de su orilla izquierda original, la numeración comenzará con pA1, pB1, etc. Si existe alguna duda acerca del número original de filas como en el caso del fragmento inferior (con ancho original) de un panel todo jeroglífico la 'p' precederá el número solamente de esta manera: Ap1, Bp1, etc. Con esta anotación se aclara la naturaleza provisional de la designación.

Si tras describir un nuevo fragmento, el cual todavía no forma el comienzo del texto, es necesario revisar la designación aún provisional para un bloque jeroglífico, puede ser identificado por el uso de la letra 'q' en vez de 'p'.

Otra dificultad es que una serie alfábética y numérica tiende a implicar el orden correcto de lectura, aunque en efecto ésto casi siempre es el caso. El procedimiento usado por Morley era encontrar la fecha de apertura para empezar la designación de letras con la columna en que ésta se encontraba y proceder entonces de izquierda a derecha. Sin embargo puede haber dificultades en el caso de un panel aislado de jeroglíficos. Algunas veces es posible reconocerlo como la continuación de una columna que simplemente ha sido interrumpida por algún diseño no jeroglífico; en otros casos claramente no forma parte del texto principal pero podría ser un epígrafe relacionado con una figura subsidiaria o alguna otra clase de materia secundaria.

Para tales situaciones Linton Satterthwaite ha trazado un plan que se está aplicando, cuando es necesario, a los monumentos en Tikal. El texto principal recibe la designación convencional. Los paneles o textos secundarios son identificados por letras al final del alfabeto y los jeroglíficos en ellos están designados normalmente, sólo que las columnas (A, B, C, etc.) llevan como prefijo la letra dada a ese texto (en minúscula). Una ilustración de este caso es suplido por el Altar 5 de Tikal. Dos paneles no marcados por Morley (una fila y una columna) están cercados por la banda jeroglífica identificada por él. Ahora están designados como Panel Y y Panel Z y contienen los bloques jeroglíficos yA1-yA4 y zA1, zA2.

A pesar de ser éste un sistema de nomenclatura tan bien concebido, los recopiladores del *Corpus* han decidido no adoptarlo porque creemos que el peligro de crear una complejidad adicional y de incorporar o separar erróneamente a un grupo del texto principal excede las ventajas que el sistema posee. No obstante, las designaciones serán aplicadas de tal manera que correspondan cuando sea posible con el orden aparente de lectura. A los lectores del *Corpus* se les pide que consideren estas designaciones en primer lugar como meros indicadores de posición de los jeroglíficos en las ilustraciones y sólo después y para cada caso en particular decidir si (o hasta qué grado) son guías válidas para el orden de lectura del contenido de los bloques.

3. Desafortunadamente no pudieron usarse claves que conforman con cualquier sistema uniforme de designación de lugares (Rowe 1971), principalmente porque su única justificación en este contexto—su brevedad—se perdería y también porque en muchos casos no existen datos geográficos suficientes. Las claves ideadas aquí poseen la gran ventaja de ser derivadas de los nombres comunes de los sitios y por lo tanto son generalmente fáciles de reconocer. Existen pocas instancias en las cuales letras claves "innaturales" tuvieron que ser escogidas para evitar confusión entre sitios de nombres similares. Se ha permitido por ejemplo que la clave ambigua, YAX, designe a Yaxchilan, a pesar de la posibilidad de confusión con Yaxha, ya que la gran cantidad e importancia de la escultura de Yaxchilan justifica usar ahí la clave más obvia.

4. La técnica y los problemas en fotografía no se discutirán aquí, especialmente porque no son de carácter estático, sino que evolucionan de un año al otro. Así pues tengo la esperanza de que se note un mejoramiento en la calidad de las fotografías a partir del Volumen 3 como consecuencia de cambios en la técnica de iluminación. Una discusión de este tema se contempla para publicación en otra parte. Por el momento es suficiente decir que las fotografías son tomadas generalmente con luz artificial de tal manera que en exposiciones sucesivas se alumbre de diferentes direcciones, el eje del lente fotográfico mantenido siempre perpendicular a la superficie esculpida.

No hay mucho que se pueda decir acerca de la técnica del dibujo y hay poca esperanza en cuanto al adelanto de ese técnica durante el progreso del *Corpus*. Sin embargo hay algunos comentarios que se pueden hacer que influyen en la interpretación de los dibujos.

Nuestros dibujos están trazados en hojas de Mylar polyester, basados en calcos hechos de fotografías impresas a una escala de 1:4 (o más grandes, cuando el dibujo se va a reproducir a una escala mayor que de 1:10). Para los detalles incorporados en el dibujo se ha dependido a gran grado en dibujos hechos a lápiz en presencia de la escultura original; éstos son siempre verificados en la oscuridad de la noche usando luz artificial arreglada de tal manera que ilumine a la piedra oblicuamente y en varias direcciones para hacer resaltar las más tenues huellas del relieve. La Figura 1 se presenta aquí para mostrar como diferentes rasgos de una superficie labrada aparecen con diferentes iluminaciones, así como para indicar la necesidad de la colocación de la cámara exactamente perpendicular al área fotografiada para evitar deformaciones.

Además de los dibujos de campo y las fotografías hay otros recursos que se pueden utilizar en la ejecución de la versión final del dibujo, tal como maquetas de yeso (especialmente valiosas en el caso de dinteles *in situ* o de esculturas con superficies curvas como la Estela 35 de Naranjo) así como viejas fotografías que muestran detalles esculturales o aún fragmentos enteros ya desaparecidos.

En general existen dos maneras de representar un relieve en papel, ya sea con pluma o con lápiz. Una técnica aspira a dar un efecto natural, simulando la textura de la piedra y el juego de la luz sobre ella, usando eficazmente el punto o el rayado; la otra es un dibujo lineal que no pretende más que ser esquemático, sin sugerir ni plasticidad ni iluminación desde una dirección en particular. Esta última es la técnica adoptada en este trabajo. Además de requerir menos talento artístico, el dibujo lineal tiene la ventaja de contener más información en un área dada. Esto resulta importante porque en el

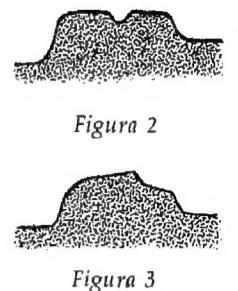


Figura 2

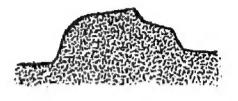


Figura 3

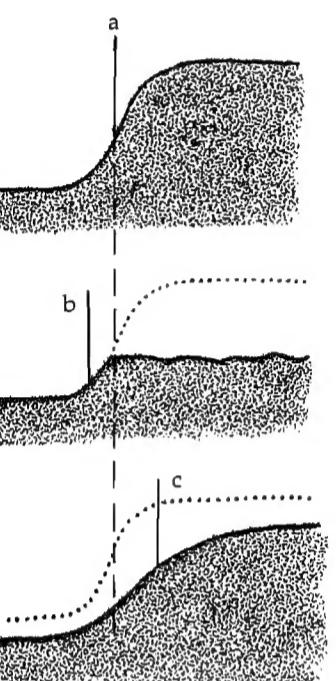


Figura 4

cuero de escultura maya hay piezas tan finamente talladas que hacer la versión realística a una escala más reducida resulta infactible, si los detalles más mínimos no se han de perder. Aún en un dibujo lineal, existen dificultades con áreas marcadas con rayas cruzadas en las cuales las líneas están separadas por menos de 2 mm. en el original, medio milímetro a escala de calco o un quinto de milímetro en reproducción.

Normalmente en bajos relieves mayas lo convencional parece ser que las figuras están grabadas ante una pared lisa o un cielo claro, representados por una superficie hundida. El fondo de los jeroglíficos, aunque éstos estén grabados en un panel elevado o estén aislados en un marco, es también liso. En donde un glifo contiene una apertura, ésta se encuentra al nivel general del fondo. Por lo tanto el dibujo lineal se presenta claramente si el fondo es punteado. En el *Corpus* la densidad del punteo se usa para representar la probabilidad de que ninguna figura haya sido tallada en esa área. Por ejemplo, si en el área rodeando un penacho parte del fondo liso está picado, un punteo menos denso será usado, porque la existencia pasada de algún detalle, tal como un par de glifos incisos o una pluma, no se puede descartar completamente. Además el fondo punteado tiene la ventaja de poder representar el perfil gastado de un glifo u otro elemento en cualquier grado de vaguedad deseado.

Ocasionalmente hay dificultades con la aplicación de punteo. Las dudas más comunes y más serias son con la interpretación de pequeñas superficies hundidas: ¿simbolizan hoyos en el objeto representado o son meramente depresiones en él? Cuando hay incertidumbre lo mejor es dejar el punteado a un lado, indicando el relieve de la siguiente manera: si se mira cuidadosamente cualquier fondo punteado en este trabajo se notará que la línea que encaja el área (una orilla de relieve saliente) está reforzada con puntos espaciados estrechamente a lo largo del lado bajo o punteado. De igual manera, en la ausencia del punteado, una fila similar de puntos tocando una línea de un lado significa que en ese costado la superficie se inclina. Esta anotación, sin embargo, se empleará solamente cuando existen dudas sobre la interpretación de un pasaje.

Hasta donde sea posible, el estilo de la escultura original se ha conservado en el dibujo lineal, haciendo un esfuerzo consciente de contener cualquier tendencia a suavizar curvas erráticas o eliminar otras señas de pobre ejecución. Los dibujos lineales son deficientes en un aspecto importante, pues no transmiten la calidad particular de redondez, o falta de ella, en el relieve. Para dar un ejemplo, la sección transversal del cartucho u orilla de un glifo es a menudo como se representa en la Figura 2. No obstante, ciertos escultores, rechazando el uso de una línea inferior incisa trabajaron cuidadosamente la piedra hasta formar otra sección transversal, Figura 3. La diferenciación entre éstas dos en un dibujo a pequeña escala, cualquiera que sea la técnica usada, sería una prueba de habilidad para cualquier dibujante, pero en un dibujo lineal esta labor es simplemente imposible. Por lo tanto la calidad del relieve debe ser juzgado a base de las fotografías (véase también la nota 5).

Para representar una línea cuyo curso (o aún su existencia) es incierto usamos una línea punteada, con el grado de incertidumbre expresado por el espaciado de los puntos. Líneas sólidas por lo tanto son usadas solamente para figuras de cuyas formas no existe duda alguna. Aunque parece ser un principio bastante simple, es uno que difícilmente se puede mantener riguroso. El dibujante (para su consternación) se encuentra repetidamente con la humillante evidencia de su propia presunción, como cuando al terminar de dibujar una escultura en buen estado, descubre una fotografía antigua mostrando la misma pieza en condición primitiva; muchas de las líneas sólidas contienen pequeños pero posiblemente importantes defectos.

Para poder distinguir entre las líneas que llegan a un final definido y otras que están interrumpidas por la erosión o por quebraduras, éstas últimas están rematadas en el dibujo con un punto que quizás no pueda ser notado sin el uso de un lente de aumento.

Un pequeño problema representando relieves esculturales por medio de dibujos lineales resulta por el desplazamiento de líneas que puede ocurrir la erosión. Mientras que sería presumtivo afirmar que las líneas son dibujadas para que correspondan con cualquier punto precisamente determinado sobre el borde del relieve, puede decirse que el punto se encuentra aproximadamente a medio declive o quizás un poco más arriba. La erosión puede causar un desplazamiento en cualquier dirección. Si las áreas elevadas han sido preferencialmente gastadas dejando el fondo sin afectar, el resultado de un descascaramiento o otros procesos no comprendidos como en la Estela 23 de Naranjo, por ejemplo, entonces el pie del relieve permanecerá claro justificando una línea sólida en el dibujo, aunque ésta línea haya sido desplazada hacia afuera (b en la Figura 4). En contraste, los productos ácidos de la descomposición de musgos y humus atacan a la piedra más uniformemente, produciendo como consecuencia un movimiento hacia adentro de la línea aparente (c en la Figura 4). Consecuentemente una pluma u otro elemento angosto a parecerá bien distintivo, pero habrá sufrido una atenuación considerable. Quizás sea aún más notorio el vacío que aparece entre elementos, como entre el signo principal jeroglífico y los ajos que una vez hicieron contacto con él.

Puntos representados por hoyos taladrados en la escultura son un elemento común en los diseños mayas y en las piedras gastadas por la intemperie se confunden fácilmente con huecos causados por la erosión. Los puntos sobre los cuales no existe duda alguna están representados en estos dibujos por puntos bien marcados y los dudosos por tres pequeños puntos, mientras que un anillo de autenticidad incierta está representado por cinco o más puntos en un círculo. Se ha hecho el esfuerzo por dibujar el número correcto de puntos o cuentas que aparecen en el arte figurativo y en ajos jeroglíficos tales como T-32 o T-36. El número de líneas, sin embargo, en un área marcada por rayas cruzadas no se reproduce tan cuidadosamente, por tener menor significación.

5. Glifos tallados en piedra de grano fino, con detalles interiores ligeramente esculpidos o incisos, son gastados por la intemperie como perfiles claros alrededor de interiores totalmente en blanco. Estos no son problemáticos en su representación. El caso difícil existe con un glifo tallado profundamente en una piedra de composición burda y dispares. Si en este caso un elemento significativo se va a reconocer entre las protuberancias y depresiones causadas principalmente por la erosión, será porque la posición de ese glifo en el texto es reconocido. Combinaciones jeroglíficas tales como los Glifos Emblema, glifos Imix-peine-Imix y miembros de cláusulas conocidas pueden ser discernidos mientras que glifos vecinos igualmente deteriorados tendrán que ser representados en blanco en el dibujo. En tales casos el epigrafista del futuro, mejor preparado, quizás se sienta decepcionado por la publicación de sólo una fotografía y un dibujo lineal.

## Appendix A Sources of Sculpture and Their Codes

La solución parece estar en la fotografía tridimensional. En la primera publicación emitida, Volumen 2, 1ra. parte, fotografías estereoscópicas son suministradas solamente para los paneles jeroglíficos en el frente de las Estelas 22 y 23 de Naranjo, pero en volúmenes subsecuentes serán proveidas más liberalmente. Se pretende que estos pares estereoscópicos sean examinados con un visor de bolsillo manufacturado para el uso con fotografías aéreas.

Se ha sugerido que si se van a tomar fotografías estereoscópicas, entonces el próximo paso a dar sera la fotogrametría. Me parece una sugerión dudosa, ya que el costo de la estereodelineación es bastante alto y no es muy claro qué beneficios pueda ofrecer esta técnica en el presente contexto, aún cuando se han hecho alegaciones en favor de ella en conexión con un problema no encontrado en la escultura maya: la separación de inscripciones palimpsestas (Silva y Fernando 1971).

6. Determinar la latitud y longitud de ruinas en la selva por medio de tránsito y cronómetro, como fue intentado por las expediciones de la Institución Carnegie en los años de 1920 y 1930 está acompañada de ciertas dificultades. En aquellos días el origen de serios errores era el cronómetro; ésto ha sido hoy en día casi completamente eliminado, ya que relojes de pulsera de una exactitud no conocida previamente se encuentran disponibles y pueden ser sincronizados por señales recibidas en radios portátiles. Pero otro impedimento persiste. La altura de la Estrella Polar es tan baja en las latitudes de los lugares mayas que las observaciones son sólo posibles si existen grandes áreas despejadas de árboles extendiéndose al norte y al sur o si hay una pirámide alta libre de maleza en su cima. En el transcurso de una temporada de excavación de un sitio a veces se puede cumplir sin mucha dificultad una de estas condiciones, pero es casi imposible despejar los árboles durante una visita hecha con el solo propósito de registrar la escultura.

Por lo tanto, otro método tiene que ser usado. Generalmente el único método factible es hacer un recorrido sobre tierra desde una estación conocida y correlacionar más tarde la trayectoria con fotografías estereoscópicas aéreas. A lo largo del camino se toma a cada minuto la lectura de la brújula junto con notas de rasgos naturales predominantes: pantanos, escarpaduras, arroyos, etc. Datos durante un viaje hacia un sitio pueden ser útiles en dirigirnos hacia una meta en particular, pero son probablemente menos exactos que aquéllos tomados en el viaje de regreso, cuando hay menos obstáculos que superar (muchas veces a fuerza de machete) y consecuentemente menos interrupciones que en la entrada.

Después de que el recorrido ha sido trazado en una escala aproximada a la de las fotografías aéreas, éste tendrá que ser torcido y estirado aquí y allá para que los riachuelos que se cruzaron y las escarpaduras que se ladearon correspondan con las formas que aparecen en las fotografías aéreas. Es entonces cuando las ruinas pueden ser ubicadas. Una persona experimentada puede a menudo reconocer las ruinas por el aspecto de la vegetación alrededor de ellas: los parches oscuros del árbol ramón o sobre la cúspide de los altos montículos, el pálido resplandor de las higueras.

Esta técnica ha demostrado tener buen éxito en el Petén, fallando únicamente en regiones *karst* donde existen escasos otros contornos geográficos además de colinas y éstas, debido a su abundancia, son casi indistinguibles en su medio o en vistas aéreas estereoscópicas.

### Sites

Ichpaatun	ICP	Poco Uinic, see Santa Elena P.U.
Iki, see Ikal	IKL	Polol POL
Ikal	IKL	Pomona, Belize PMB
Iitsimte-Sacluk	ITS	Pomona, Tabasco PMT
Itzan	ITN	Portón, El PRT
Itzimte-Bolonchen	ITB	Porvenir, El PVR
Ixkun	IXK	Pusilha PUS
Ixlu	IXL	Quen Santo, see Sacchana
Ixtelha	IXH	Quirigua QRG
Ixtutz	IXZ	Retiro, El RTR
Izapa	IZP	Río Amarillo RAM
Anonal	ANL	Río Azul RAZ
Balakbal	BLK	Río Bec RBC
Bauí, El	BUL	Río Michol RMC
Benque Viejo	BVJ	Sacchana SCN
Bonampak	BPK	Sacul SCU
Calakmul	CLK	Salinas de los Nueve Cerros SAL
Cancuen	CNC	San Clemente SCM
Caracol	CRC	San Isidro Piedra Parada, see Abaj Takalik
Caribe, El	CRB	San Lorenzo, Campeche SLM
Cayo, El	CAY	San Lorenzo, Chiapas SLS
Cedral, El	CDR	San Pedro, see Dzibilchel
Ceibal, see Seibal		Santa Elena Poco Uinic SEP
Cenotillo	CNT	Santa Margarita Colombia, see Abaj Takalik
Chacchoben	CHB	Santa Rita Corozal SRC
Chal, El	CHL	Santa Rosa Xlabpak, see Santa Rosa Xtampak
Chapayal	CPL	Santa Rosa Xtampak SRX
Chiapa de Corzo	CPC	Santoton STN
Chichen Itza	CHN	Sayil SAY
Chichmul	CMU	Seibal SBL
Chiczapote, El	CZP	Silan, see Dzilam
Chilib	CLB	Sisilia SIS
Chinahá	CNH	Stephens, see Lacanha
Chinikiha	CNK	Tabi, Hacienda TBI
Chinkultic	CKL	Tamarindito TAM
Chochkitam	CKM	Tayasal TSL
Chocola	CCL	Telantunich TLT
Chorro, El, see Pasión del Cristo		Telemán TMN
Chuctiепa	CTP	Tenam Puente TEN
Chumuc-ha, see Pusilha		Tikal TIK
Chumhuitz	CNZ	Tila TLA
Cival	CVL	Tohcol TCK
Coba	COB	Tonala TNL
Collections	COL	Tonina TNA
Comalcalco	CML	Topoxte TPX
Comitan	CMT	Tortuguero, El TRT
Conacabé	CSB	Tres Islas TRS
Copan	CPN	Tulum TUL
Cozumel	COZ	Tunkuyi TUN
Dos Pilas	DPL	Tzendales TZD
Dos Pozos, see Dos Pilas		Tzibanche TZB
Dzibilchaltun	DBC	Tzimin Kax, see Mountain Cow
Dzibilnocac	DBN	Tzocchen TZC
Dzilam	DZL	Tzum TZM
Dzitbalche	DZT	Uaxactun UAX
Edzna, see Etzna		Uaymil UYM
Ek Balam	EKB	Ucanal UCN
Encanto, El (Chiapas), see Finca Encanto		Ukum UKM
Encanto, El (Peten)	ENC	Uolantun UOL
Esperanza, La	ESP	Uxul UXL
Etzna	ETZ	Xamantun, see Muñeca, La
Finca Encanto	FNC	Xcalumkin XLM
Flores	FLS	Xcocha XCA
Florida, La	FLD	Xcochkax XCK
Guaquitepec	GQT	Xcoloc, see Xculoc
Guaymil, see Uaymil		Xcoralche XCR
Halakal	HLK	Xculoc XCL
Halal	HLL	Xkibchmook XKM
Hatzcab Ciel, see Mountain Cow		Xkombec XKB
Higos, Los	HIG	Xmakabatun XMK
Holactun, see Xcalumkin		Xnucbec XNC
Honradez, La	HRZ	Xultun XUL
Hoitzuc, Hacienda	HTZ	Xunantunich, see Benque Viejo
Huntichmul	HNT	
Ichmac	ICC	
Ichmul	ICL	
Pechal	PCL	
Peru, El	PRU	
Pestac	PST	
Pich Corralche, see Xcoralche		
Piedras Negras	PNG	
Pixoy	PIX	
Pochitoca, La	PCT	

## Appendix B

Xupa XUP	ENC El Encanto, Petén
Xutilha XTL	ESP La Esperanza
Yalcabakal YLC	ETZ Etzna
Yaltit, see Yaltutu	FLD La Florida
Yaltutu YLT	FLS Flores
Yaxchilan YAX	FNC Finca Encanto
Yaxcopoil YXP	GQT Guaquepec
Yaxha YXH	HIG Los Higos
Yaxuna YXN	HLK Halakal
Yula YUL	HLL Halal
Zapote, El ZAP	HNT Huntchmul
	HRZ La Honradez
	HTZ Hacienda Hotzuc
	ICC Ichmac
	ICL Ichmul
	ICP Ichpaatun
	IKL Ikil
	ITB Itzimte-Bolonchen
	ITN Itzan
	ITS Itsimte-Sacluk
	IXH Ixtelha
	IXK Ixkun
	IXL Ixlu
	IXZ Ixtutz
	IZP Izapa
	JAI Jaina
	JMB Jimbal
	JNT Jonuta
	KAB Kabah
	KAX Kaxuinic
	KJU Kaminaljuyu
	KNA Kana
	KNK Kanki
	KYL Kayal
	LAB Labna
	LAC Lacanha
	LAG Lagunita
	LBT Lubantun
	LGP Laguna Perdida
	LOL Lolotun
	LPM López Mateos
	LTI Lashtunich
	MAR La Mar
	MCA La Muñeca
	MCW Mountain Cow
	MLC Mulchic
	MLP La Milpa
	MLS Muluch Tsekal
	MNC Mario Ancona
	MNG Managua
	MPN Mayapan
	MQL Machaquila
	MRD Mirador
	MRF Miraflorres
	MRL Moral
	MTL Motul de San José
	NAR Naranjo
	NAY La Naya
	NCT Naachtun
	NKM Nakum
	NPT Nohpat
	OAG Ojo de Agua
	OKP Okop
	OKX Oxkintok
	OXL Oxlahuntun
	OXP Oxpemul
	PAB El Pabellón
	PAL Palenque
	PCL Pechal
	PCR Pasión del Cristo
	PCT La Pochitoca
	PDR Padre Piedra
	PIX Pixoy
	PLM El Palmar
	PMB Pomona, Belize
	PMT Pomona, Tabasco

### Codes

ABJ Abaj Takalik
ACN Acanmul
AGC Aguas Calientes
AGT Aguateca
ALH Altun Ha
ALM Altamira
ALS Altar de Sacrificios
AML La Amelia
AMP El Amparo
ANL Anonal
BLK Balakbal
BPK Bonampak
BUL El Baul
BVJ Benque Viejo
CAY El Cayo
CCL Chocola
CDR El Cedral
CHB Chacchoben
CHL El Chal
CHN Chichen Itza
CKL Chinkultic
CKM Chochkitam
CLB Chilib
CLK Calakmul
CML Comalcalco
CMT Comitan
CMU Chichmul
CNC Cancun
CNH Chinah
CNK Chinkilka
CNT Cenotillo
CNZ Chunhuitz
COB Coba
COL Collections, public or private
COZ Cozumel
CPC Chiapa de Corzo
CPL Chapayal
CPN Copan
CRB El Caribe
CRC Caracol
CSB Consacbe
CTP Chuctiapa
CVL Cival
CZP El Chicozapote
DBC Dzibilchaltun
DBN Dzibilnocac
DPL Dos Pilas
DZL Dzilam
DZT Dzitbalche
EKB Ek Balam

PNG Piedras Negras
PNH Panhale
PNT Pantaleón
POL Polol
PRS El Paraiso, Yucatan
PRT El Portón
PRU El Peru
PSD La Pasadita
PST Pestac
PUS Pusilha
PVR El Porvenir
QRG Quirigua
RAM Río Amarillo
RAZ Río Azul
RBC Río Bec
RMC Río Michol
RTR El Retiro
SAL Salinas de los Nueve Cerros
SAY Sayil
SBL Seibal
SCM San Clemente
SCN Sacchana
SCU Sacul
SEP Santa Elena Poco Uinic
SIS Sisilia
SLM San Lorenzo, Campeche
SLS San Lorenzo, Chiapas
SRC Santa Rita Corozal
SRX Santa Rosa Xtampak
STN Santoton
TAM Tamarindito
TBI Hacienda Tabi
TCK Tohkok
TEN Tenam Puentz
TIK Tikal
TLA Tila
TLT Telantunich
TMN Teleman
TNA Tonina
TNL Tonala
TPX Topoxte
TRS Tres Islas
TRT El Tortuguero
TSL Tayasal
TUL Tulum
TUN Tunkuyi
TZB Tzibanche
TZC Tzochen
TZD Tzendales
TZM Tzum
UAX Uaxactun
UCN Ucanal
UKM Ukum
UOL Uolantun
UXL Uxul
UYM Uaymil
XCA Xcocha
XCK Xcochka
XCL Xculoc
XCR Xcoralche
XKB Xkombec
XKM Xkichmook
XLM Xcalumkin
XMK Xmakabatun
XNC Xnucbec
XTL Xutilha
XUL Xultun
XUP Xupa
YAX Yaxchilan
YLC Yalcabakal
YLT Yaltutu
YUL Yula
YXI Yaxha
YXN Yaxuna
YXP Yaxcopoil
ZAP El Zapote

### ABBREVIATIONS FOR MONUMENT TYPES

The following abbreviations for the major classes of monumental and architectural inscriptions are recommended:

Alt.	Altar	MrL.	Mural painting
BSc.	Ball-court sculpture	Msc.	Miscellaneous
Col.	Column	Pan.	Panel
Crn.	Cornice	Pil.	Pilaster or pier
Frg.	Fragment	St.	Stela
HS.	Hieroglyphic stairway, or step	Tab.	Tablet
Jmb.	Jamb	Trn.	Throne
Lnt.	Lintel	Zom.	Zoomorph
Mon.	Monument		

For the sake of keeping changes in established nomenclature to the minimum, "Tablet" and "Panel" are both retained, even though nearly identical in connotation, as is also "Fragment," which might have been subsumed into "Miscellaneous." It will be noticed that the abbreviations serve equally well for their Spanish equivalents, with the exceptions of HS., St., and BSc.

### SCHEDULE OF MEASUREMENTS AND ABBREVIATIONS USED FOR THEM

For stelae, the measurements routinely taken follow the pattern established by Linton Satterthwaite (1958, p. 116). According to his definition of what there is called HA, and here HLC, it is "measured from the base of the carved design to the highest point of the stone. It includes a plain border at the top, if any, and a little more height occasioned by the convexity of the top, as seen from the side." Satterthwaite's HB is the same measurement as PB in our usage.

The "plus" indicates that the figure given is a minimum. It will be placed, for example, after the figure for the height of a stela when the top of it is missing, and after the figure for butt exposure when this is measured from present ground level, in the absence of an exposed plaster floor.

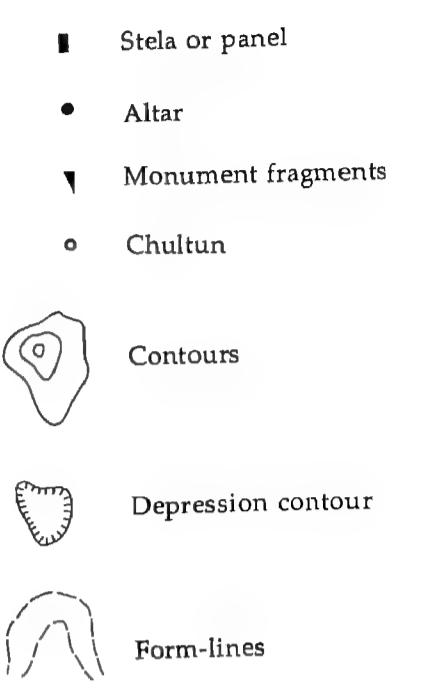
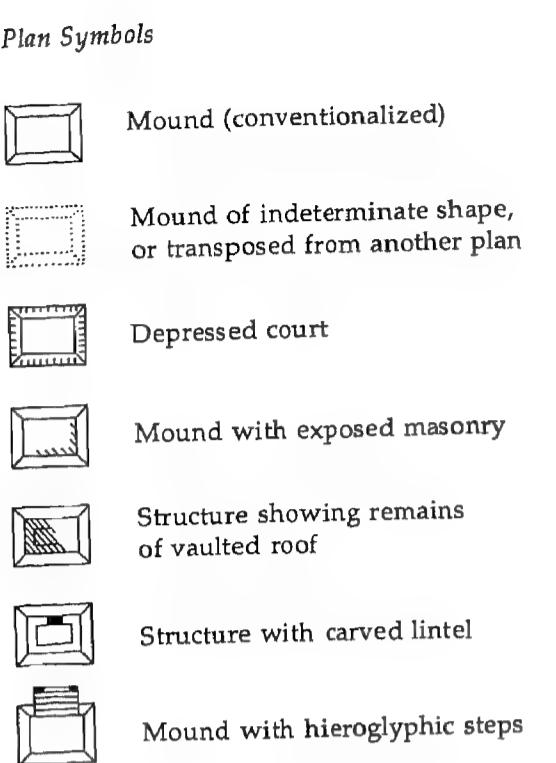
Ht	Height	MW	Maximum width
HLC	Height above lowest carving	WBC	Width at base of carving
HSc	Height of sculptured area	WSC	Width of sculptured area
	(lintels, panels, etc.)		(lintels, panels, etc.)
PB	Height of plain butt	Dia	Diameter
EPB	Exposure above floor	MTh	Maximum thickness
	of plain butt	Rel	Maximum depth of relief

### SYMBOLS EMPLOYED IN MAPS AND PLANS

### Map Symbols

	River		Town
	Escarpment (points downhill)		Village
	Lake		Campsites or small settlements
	Ruins (ceremonial center)		Minor ruins
	Seasonal swamp (bajo)		Swamp (aguada)
	Highway		International boundary
	Trail		

## Appendix C Table of tun-endings between 8.1.15.0.0 and 10.9.3.0.0.



12	6	13	7	1	9.0.0.	8	2	9	3	10	4	11	5	Ahau	13 Ceh													
8	2	9	3	10	4	11	5	9.11.0.	12	6	13	7	1	II	8 Ceh													
4	11	5	12	6	13	7	1	8	2	9	10.2.0.	3	10	II	3 Ceh													
13	7	1	8	2	9	3	10	4	11	5	12	6	II	18 Zac														
9	3	10	4	11	5	12	6	13	7	1	8	2	II	13 Zac														
8.2.0.	5	12	6	13	7	1	8	2	9	3	10	4	11	II	8 Zac													
1	8	2	8.13.0.	9	3	10	4	11	5	12	6	13	7	II	3 Zac													
10	4	11	5	12	6	9.4.0.	13	7	1	8	2	9	3	II	18 Yax													
6	13	7	1	8	2	9	3	10	10	9.15.0.	4	11	5	12	II	13 Yax												
2	9	3	10	4	11	5	12	6	13	7	1	10.6.0.	8	II	8 Yax													
11	5	12	6	13	7	1	8	2	9	3	10	4	11	II	3 Yax													
7	1	8	2	9	3	10	4	11	5	12	6	13	7	II	18 Chen													
3	8.6.0.	10	4	11	5	12	6	13	7	1	8	2	9	II	13 Chen													
12	6	13	7	8.17.0.	1	8	2	9	3	10	9.8.0.	5	12	6	13	II	3 Chen											
8	2	9	3	10	4	11	5	12	6	13	7	1	10	II	18 Mol													
4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	II	3 Mol												
13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	II	18 Yaxkin												
9	3	10	4	11	5	12	6	13	7	1	8	2	9	II	8 Yaxkin													
5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	II	3 Mol												
1	8	9.10.0.	2	9	3	10	4	11	5	12	6	13	7	II	18 Yaxkin													
10	4	11	5	12	6	9.1.0.	6	13	7	1	8	2	9	3	II	13 Yaxkin												
6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	II	8 Yaxkin											
2	9	3	10	4	11	5	12	6	13	7	10.3.0.	1	8	3	II	3 Yaxkin												
11	5	12	6	13	7	1	8	2	9	3	10	4	11	II	18 Xul													
7	1	8	2	9	3	10	4	11	5	12	6	13	7	II	13 Xul													
8.3.0.	3	10	4	11	5	12	6	13	7	1	8	2	9	II	8 Xul													
12	6	13	8.14.0.	7	1	8	2	9	3	10	4	11	5	12	6	13	II	3 Xul										
8	2	9	3	10	4	9.5.0.	11	5	12	6	13	7	1	II	18 Tzec													
4	11	5	12	6	13	7	1	8	9.16.0.	2	9	3	10	II	13 Tzec													
13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	II	8 Tzec												
9	3	10	4	11	5	12	6	13	7	1	8	2	9	II	3 Tzec													
5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	II	18 Zolz										
1	8.7.0.	8	2	9	3	10	4	11	5	12	6	13	7	1	II	13 Zolz												
10	4	11	5	8.18.0.	12	6	13	7	1	8	9.2.0.	2	9	3	10	II	8 Zolz											
6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	II	3 Zolz											
2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	II	18 Zolz											
11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	II	3 Zolz									
7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	II	18 Zolz												
3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	II	8 Uo										
12	6	8.11.0.	13	7	1	8	2	9	3	10	4	11	5	12	6	13	II	18 Uo										
8	2	9	3	10	9.2.0.	4	11	5	12	6	13	7	1	8	2	9	3	II	3 Uo									
4	11	5	12	6	13	7	1	8	9.13.0.	8	10	4	11	5	10.4.0.	12	6	13	II	3 Uo								
13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	II	18 Pop							
9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	II	3 Pop					
5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	II	3 Cumku				
3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	II	18 Cumku				
12	8.8.0.	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	II	3 Cumku				
8	2	9	3	10	9.19.0.	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	II	18 Kayab	
4	11	5	12	6	13	7	1	8	9.10.0.	1	8	2	9	3	10	4	11	5	12	6	13	7	1	II	13 Kayab			
13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	II	3 Kayab
9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	II	18 Pax			
5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	II	13 Pax	
1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	II	8 Pax		
10	4	8.12.0.	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	II	18 Muan				
6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3</td								

## Appendix D *A complete Calendar Round in tabular form, giving the position of tun-endings between 8.1.15.0.0 and 10.9.3.0.0.*

In the tables that follow, one complete Calendar Round is set out, divided into Vague Years of 365 days. These tables are reproduced from J. T. Goodman's appendix to the *Biologia Centrali-Americanica (Archaeology)* (Maudslay 1889-1902), with some additions and alterations. The chief alteration concerns the starting point, for in the original version the round of 52 years began with what is now the 13th Year. Reasons for the change are given below.

The principal additions are the notations in Long Count placed at the heads of columns, each referring to the day Ahau that appears in that column in bold type. All being *tun*-endings, or endings of larger periods, they have been abbreviated by the omission of the zero terms for *uinal*s and *kins*, as shortage of space required.

A particular day Ahau, such as 5 Ahau 18Yax, occurs but once in each Calendar Round; of course, the same is true of any day. As round succeeds round, the significance of this day in the Long Count will vary: usually it concludes a *uinal*; about once in every eighteen rounds it takes on greater importance as a *tun*-ending; and still more infrequently it appears as a *katun*- or *baktun*-ending.

It should be apparent that the addition of these Long Count notations to Goodman's tables is a practical proposition only because all the appearances of each day Ahau in the lesser role of *uinal*-ending have been ignored. When required, however, these are very simply determined: the example cited, 5 Ahau 18Yax (table for the 1st Year), occurs as a *tun*-ending at 8.13.1.0.0, but it is clear from inspection of the columns to its left for the months Chen, Mol, Yaxkin, etc., that it occurred as a *uinal*-ending at 9.11.10.1.0, 8.2.10.2.0, 9.0.19.3.0, etc. Thus the tables provide a rapid method of finding all possible positions in the Long Count (within limits) for a CR (Calendar Round) date, regardless of whether it be a day Ahau, since it is a simple matter to count the days from any CR date whatever back to the preceding day Ahau.

Distance numbers, too, if they are not much longer than one year, may easily be counted off in either direction; the ability to do so is particularly useful in testing all possible combinations of distance numbers and the dates that they lead up to when these are unclear or incomplete. Larger distance numbers, however, are better handled by adding them to (or subtracting them from) the relevant Long Count date—or any Long Count date that is possible for the given CR date, should its correct placement be unknown. Alternatively, CR dates and distance numbers may be computed, with or without the help of ready-reckoning tables such as those given in appendix E.

Limits clearly had to be set to the time span covered by the Long Count notations. In practice, a clear presentation could be achieved only by restricting the identifying dates to one for each day Ahau, thus providing coverage for some eighteen rounds. Only rarely is this limitation likely to prove inconvenient, in view of the fact that the Classic Period, within which the great majority of dates recorded on the monuments fall, encompasses the passage of only about twelve and a half rounds.

The change of opening year for the tables, referred to above, is due to a suggestion by John Justeson. Computations, as he points out, are made simpler by the use of 1 Imix 4Uayeb as the first day of the 52-year cycle, instead of 4 Ahau 8Cumku, or the 1 Ik, Pop Seated, employed by Goodman. Furthermore, there is scarcely any doubt that the Sacred Round started with 1 Imix, or that 4Uayeb was the end of the Vague Year. The tables in appendix E, prepared by Justeson, operate from this starting point.

At the upper left-hand corner of each of the Goodman tables a number is

printed that represents the count of days elapsed since 1 Imix 4Uayeb at the commencement of that Vague Year. These numbers are provided so that the numerical position of any date in the table may be found. Starting from the left, columns of twenty days each are counted across, then days downward as far as the date in question; finally the sum of these is added to the figure given for the starting position. Conversely, once the numerical position of a CR date has been calculated by means of equations or tables, that date can be located in the Goodman tables by reference to the starting position numbers. In so doing, the correctness of the calculation is verified against the table.

INDEX TO KATUN-ENDINGS IN THE CALENDAR ROUND TABLES	8.2.0.0.0	43	8.18.0.0.0	47	9.14.0.0.0	50
	8.3.0.0.0	11	8.19.0.0.0	14	9.15.0.0.0	18
	8.4.0.0.0	31	9.0.0.0.0	34	9.16.0.0.0	38
	8.5.0.0.0	50	9.1.0.0.0	2	9.17.0.0.0	5
	8.6.0.0.0	18	9.2.0.0.0	22	9.18.0.0.0	25
	8.7.0.0.0	38	9.3.0.0.0	41	9.19.0.0.0	45
	8.8.0.0.0	5	9.4.0.0.0	9	10.0.0.0.0	13
	8.9.0.0.0	25	9.5.0.0.0	29	10.1.0.0.0	32
	8.10.0.0.0	45	9.6.0.0.0	48	10.2.0.0.0	52
	8.11.0.0.0	13	9.7.0.0.0	16	10.3.0.0.0	20
	8.12.0.0.0	32	9.8.0.0.0	36	10.4.0.0.0	40
	8.13.0.0.0	52	9.9.0.0.0	4	10.5.0.0.0	7
	8.14.0.0.0	20	9.10.0.0.0	23	10.6.0.0.0	27
	8.15.0.0.0	40	9.11.0.0.0	43	10.7.0.0.0	47
	8.16.0.0.0	7	9.12.0.0.0	11	10.8.0.0.0	14
	8.17.0.0.0	27	9.13.0.0.0	31	10.9.0.0.0	34

To find the table in which a particular *tun*-ending is reached, first find the number for the preceding *katun*-ending in this index, then add to it the number of *tuns* of the date in question (and subtract 52 if a number greater than that is reached).

	Names of the months.	9.16.15	Pop.	8.18.6. Uo.	10.7.6. Zip.	9.8.7. Zotz.	8.10.8. Tzec.	9.11.9. Xul.	9.12.10. Mol.	10.1.11. Chen.	9.11.10. Kayab.	8.13.1. Yax.	10.2.1. Zac.	9.3.12. Ceh.	8.15.14. Mu'an.	10.4.14. Pax.	
0	Ik .....	2	9	3	10	4	11	5	12	6	7	1	8	2	9	3	10
1	Akbal .....	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4
2	Kan .....	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5
3	Chicchan .....	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6
4	Cimi .....	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7
5	Manik .....	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8
6	Lamat .....	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9
7	Muluc .....	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10
8	Oo .....	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11
9	Chuen .....	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12
10	Eb .....	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13
11	Ben .....	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1
12	Ix .....	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2
13	Men .....	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3
14	Cib .....	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4
15	Caban .....	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5
16	Eznenab .....	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6
17	Cauac .....	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7
18	Ahau .....	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8
19	Ymix .....	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9

	Names of the months.	9.16.16	Pop.	8.18.7. Uo.	10.7.7. Zip.	9.8.18. Zotz.	8.10.9. Tzec.	9.11.9. Xul.	9.12.10. Mol.	10.1.11. Chen.	9.11.10. Kayab.	8.13.2. Yax.	10.2.2. Zac.	9.3.13. Ceh.	8.15.15. Mu'an.	10.4.15. Pax.	
0	Manik .....	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4
1	Lamat .....	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5
2	Muluc .....	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6
3	Oo .....	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7
4	Chuen .....	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8
5	Eb .....	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9
6	Ben .....	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10
7	Ix .....	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11
8	Men .....	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12
9	Cib .....	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13
10	Caban .....	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1
11	Eznenab .....	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2
12	Cauac .....	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3
13	Ahau .....	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4
14	Ymix .....	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5
15	Ik .....	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6
16	Akbal .....	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7
17	Kan .....	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8
18	Chicchan .....	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9
19	Cimi .....	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10

	Names of the months.	9.16.17	Pop.	8.18.8. Uo.	10.7.8. Zip.	9.8.17. Zotz.	8.10.8. Tzec.	9.11.9. Xul.	9.12.10. Mol.	10.1.11. Chen.	9.11.10. Kayab.	8.13.3. Yax.	10.2.3. Zac.	9.3.14. Ceh.	8.15.5. Mac.	9.6.7. Kayab.	
0	Eb .....	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5
1	Ben .....	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6
2	Ix .....	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7
3	Men .....	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8
4	Cib .....	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9
5	Caban .....	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10
6	Eznenab .....	10	4	11	5	12											

## ARCHAIC ANNUAL CALENDAR.

## ARCHAIC ANNUAL CALENDAR.

## 5TH YEAR.

1461

	Names of the months.											
		8.18.11. Pop.	10.7.10. Uo.	9.9.1. Zip.	8.2.14. Yarkin.	9.10.12. Zoz.	9.11.14. Mol.	8.12.12. Tzec.	9.13.5. Chen.	10.4.8. Muun.	9.6.9. Pax.	8.8.10. Kayab.
0	Ik	6	13	7	1	8	2	9	3	10	4	11
1	Akbal	7	1	8	2	9	3	10	4	11	5	12
2	Kan	8	3	10	4	11	5	12	6	13	7	1
3	Chicchan	9	3	10	4	11	5	12	6	13	7	1
4	Cimi	10	4	11	5	12	6	13	7	1	8	2
5	Manik	11	5	12	6	13	7	1	8	2	9	3
6	Lamat	12	6	13	7	1	8	2	9	3	10	4
7	Muluc	13	7	1	8	2	9	3	10	4	11	5
8	Oc	1	8	2	9	3	10	4	11	5	12	6
9	Chuen	2	9	3	10	4	11	5	12	6	13	7
10	Eb	3	10	4	11	5	12	6	13	7	1	8
11	Ben	4	11	5	12	6	13	7	1	8	2	9
12	Ix	5	12	6	13	7	1	8	2	9	3	10
13	Men	6	13	7	1	8	2	9	3	10	4	11
14	Cib	7	1	8	2	9	3	10	4	11	5	12
15	Caban	8	2	9	3	10	4	11	5	12	6	13
16	Eznenab	9	3	10	4	11	5	12	6	13	7	1
17	Cauac	10	4	11	5	12	6	13	7	1	8	2
18	Ahau	11	5	12	6	13	7	1	8	2	9	3
19	Ymix	12	6	13	7	1	8	2	9	3	10	4

## 6TH YEAR.

1826

	Names of the months.											
		8.18.11. Pop.	10.7.11. Uo.	9.9.2. Zip.	8.2.15. Yarkin.	9.10.13. Zoz.	9.11.15. Mol.	8.12.13. Tzec.	9.13.6. Chen.	10.4.8. Muun.	9.6.10. Pax.	8.8.11. Kayab.
0	Manik	7	1	8	2	9	3	10	4	11	5	12
1	Lamat	8	2	9	3	10	4	11	5	12	6	13
2	Muluc	9	3	10	4	11	5	12	6	13	7	1
3	Oc	10	4	11	5	12	6	13	7	1	8	2
4	Chuen	11	5	12	6	13	7	1	8	2	9	3
5	Eb	12	6	13	7	1	8	2	9	3	10	4
6	Ben	13	7	1	8	2	9	3	10	4	11	5
7	Ix	1	8	2	9	3	10	4	11	5	12	6
8	Men	2	9	3	10	4	11	5	12	6	13	7
9	Cib	3	10	4	11	5	12	6	13	7	1	8
10	Caban	4	11	5	12	6	13	7	1	8	2	9
11	Eznenab	5	12	6	13	7	1	8	2	9	3	10
12	Cauac	6	13	7	1	8	2	9	3	10	4	11
13	Ahau	7	1	8	2	9	3	10	4	11	5	12
14	Ymix	8	2	9	3	10	4	11	5	12	6	13
15	Ik	9	3	10	4	11	5	12	6	13	7	1
16	Akbal	10	4	11	5	12	6	13	7	1	8	2
17	Kan	11	5	12	6	13	7	1	8	2	9	3
18	Chicchan	12	6	13	7	1	8	2	9	3	10	4
19	Cimi	13	7	1	8	2	9	3	10	4	11	5

## 7TH YEAR.

2191

	Names of the months.											
		8.18.10. Pop.	10.7.11. Uo.	9.9.1. Zip.	8.2.14. Yarkin.	9.10.12. Zoz.	9.11.14. Mol.	8.12.12. Tzec.	9.13.5. Chen.	10.4.8. Muun.	9.6.9. Pax.	8.8.10. Kayab.
0	Ek	8	2	9	3	10	4	11	5	12	6	13
1	Ben	9	3	10	4	11	5	12	6	13	7	1
2	Ix	10	4	11	5	12	6	13	7	1	8	2
3	Men	11	5	12	6	13	7	1	8	2	9	3
4	Cib	12	6	13	7	1	8	2	9	3	10	4
5	Caban	13	7	1	8	2	9	3	10	4	11	5
6	Ezenab	1	8	2	9	3	10	4	11	5	12	6
7	Cauac	2	9	3	10	4	11	5	12	6	13	7
8	Ahau	3	10	4	11	5	12	6	13	7	1	8
9	Ymix	4	11	5	12	6	13	7	1	8	2	9
10	Ik	5	12	6	13	7	1	8	2	9	3	10
11	Akbal	6	13	7	1	8	2	9	3	10	4	11
12	Kan	7	1	8	2	9	3	10	4	11	5	12
13	Chicchan	8	2	9	3	10	4	11	5	12	6	13
14	Cimi	9	3	10	4	11	5	12	6	13	7	1
15	Manik	10	4	11	5	12	6	13	7	1	8	2
16	Lamat	11	5	12	6	13	7	1	8	2	9	3
17	Muluc	12	6	13	7	1	8	2	9	3	10	4
18	Oc	13	7	1	8	2	9	3	10	4	11	5
19	Chuen	1	8	2	9	3	10	4	11	5	12	6

## 8TH YEAR.

2556

	Names of the months.											
		8.18.13. Pop.	10.7.13. Uo.	9.9.4. Zip.	8.2.14. Yarkin.	9.10.5. Zoz.	9.11.6. Chen.	8.12.7. Mol.	9.13.8. Tzec.	8.14.9. Pax.	9.15.0. Muun.	8.16.1. Kayab.
0	Caban	9	3	10	4	11	5	12	6	13		

## ARCHAIC ANNUAL CALENDAR.

2921

## 9TH YEAR.

	Names of the months.	Names of the days.	10.7.14. Pop.	9.9.15. Uo.	8.10.16. Zip.	9.11.17. Zotz.	9.12.18. Xul.	8.2.19. Yaxkin.	9.3.20. Mol.	10.2.21. Chen.	9.6.22. Muan.	8.8.23. Pax.	9.9.24. Yax.	8.10.25. Cumhu.	8.11.26. Uayeb.	8.12.27. Mac.	
0	Ik	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11
1	Akbal	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12
2	Kan	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13
3	Chiechan	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1
4	Cimi	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2
5	Manik	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3
6	Lamat	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4
7	Muluc	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5
8	Oc	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6
9	Chuen	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7
10	Eb	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8
11	Bcn	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9
12	Ix	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10
13	Men	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11
14	Cib	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12
15	Cahab	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13
16	Ezenab	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1
17	Cauac	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2
18	Ahau	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3
19	Ymix	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4

## ARCHAIC ANNUAL CALENDAR.

## 11TH YEAR.

	Names of the months.	Names of the days.	10.7.16. Pop.	9.9.17. Uo.	8.10.18. Zip.	9.11.19. Zotz.	9.12.20. Xul.	8.13.21. Chen.	9.14.22. Muan.	8.15.23. Pax.	9.16.24. Yax.	8.17.25. Cumhu.	8.18.26. Uayeb.	8.19.27. Mac.			
0	Eb	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13
1	Bcn	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1
2	Ix	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2
3	Men	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3
4	Cib	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4
5	Caban	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5
6	Ezenab	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6
7	Cauac	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7
8	Men	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8
9	Cib	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9
10	Cahab	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10
11	Ezenab	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11
12	Cauac	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12
13	Ahau	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13
14	Ymix	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1
15	Ik	14	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2
16	Akbal	15	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3
17	Kan	16	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4
18	Chiechan	17	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5
19	Cimi	18	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6

## 10TH YEAR.

3286

	Names of the months.	Names of the days.	10.7.15. Pop.	9.9.16. Uo.	8.10.17. Zip.	9.11.18. Zotz.	9.12.19. Xul.	8.1.20. Chen.	9.2.21. Muan.	8.3.22. Pax.	9.4.23. Yax.	8.5.24. Cumhu.	8.6.25. Uayeb.	8.7.26. Mac.			
0	Manik	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12
1	Lamat	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13
2	Muluc	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1
3	Oc	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2
4	Chuen	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3
5	Eb	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4
6	Bcn	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5
7	Ix	5</td															

## 13TH YEAR.

	Names of the months.												Pop.
	<i>Names of the days.</i>	1	8	2	9	3	10	4	11	5	12	6	13
0	Ik	1	8	2	9	3	10	4	11	5	12	6	13
1	Akbal	2	9	3	10	4	11	5	12	6	13	7	1
2	Kan	3	10	4	11	5	12	6	13	7	1	8	2
3	Chicchan	4	11	5	12	6	13	7	1	8	2	9	3
4	Cimi	5	12	6	13	7	1	8	2	9	3	10	0
5	Manik	6	13	7	1	8	2	9	3	10	4	11	1
6	Lamat	7	1	8	2	9	3	10	4	11	5	12	2
7	Muluc	8	2	9	3	10	4	11	5	12	6	13	3
8	Oe	9	3	10	4	11	5	12	6	13	7	1	4
9	Chuen	10	4	11	5	12	6	13	7	1	8	2	9
10	Eb	11	5	12	6	13	7	1	8	2	9	3	10
11	Ben	12	6	13	7	1	8	2	9	3	10	4	11
12	Ix	13	7	1	8	2	9	3	10	4	11	5	12
13	Men	1	8	2	9	3	10	4	11	5	12	6	13
14	Cib	2	9	3	10	4	11	5	12	6	13	7	1
15	Caban	3	10	4	11	5	12	6	13	7	1	8	2
16	Eznenab	4	11	5	12	6	13	7	1	8	2	9	3
17	Cauac	5	12	6	13	7	1	8	2	9	3	10	4
18	Ahau	6	13	7	1	8	2	9	3	10	4	11	5
19	Ymix	7	1	8	2	9	3	10	4	11	5	12	6

## 14TH YEAR.

	Names of the months.												Pop.
	<i>Names of the days.</i>	2	9	3	10	4	11	5	12	6	13	7	1
0	Manik	1	8	2	9	3	10	4	11	5	12	6	13
1	Lamat	3	10	4	11	5	12	6	13	7	1	8	2
2	Muluc	4	11	5	12	6	13	7	1	8	2	9	3
3	Oe	5	12	6	13	7	1	8	2	9	3	10	0
4	Chuen	6	13	7	1	8	2	9	3	10	4	11	1
5	Eb	7	1	8	2	9	3	10	4	11	5	12	2
6	Ben	8	2	9	3	10	4	11	5	12	6	13	3
7	Ix	9	3	10	4	11	5	12	6	13	7	1	4
8	Men	10	4	11	5	12	6	13	7	1	8	2	9
9	Cib	11	5	12	6	13	7	1	8	2	9	3	10
10	Caban	12	6	13	7	1	8	2	9	3	10	4	11
11	Eznenab	13	7	1	8	2	9	3	10	4	11	5	12
12	Cauac	1	8	2	9	3	10	4	11	5	12	6	13
13	Ahau	2	9	3	10	4	11	5	12	6	13	7	1
14	Ymix	3	10	4	11	5	12	6	13	7	1	8	2
15	Ik	4	11	5	12	6	13	7	1	8	2	9	3
16	Akbal	5	12	6	13	7	1	8	2	9	3	10	4
17	Kan	6	13	7	1	8	2	9	3	10	4	11	5
18	Chicchan	7	1	8	2	9	3	10	4	11	5	12	6
19	Cimi	8	2	9	3	10	4	11	5	12	6	13	7

## 15TH YEAR.

	Names of the months.												Pop.
	<i>Names of the days.</i>	3	10	4	11	5	12	6	13	7	1	8	2
0	Eb	4	11	5	12	6	13	7	1	8	2	9	3
1	Ben	5	12	6	13	7	1	8	2	9	3	10	4
2	Ix	6	13	7	1	8	2	9	3	10	4	11	5
3	Men	7	1	8	2	9	3	10	4	11	5	12	6
4	Cib	8	2	9	3	10	4	11	5	12	6	13	7
5	Caban	9	3	10	4	11	5	12	6	13	7	1	8
6	Eznenab	10	4	11	5	12	6	13	7	1	8	2	9
7	Cauac	11	5	12	6	13	7	1	8	2	9	3	10
8	Ahau	12	6	13	7	1	8	2	9	3	10	4	11
9	Ymix	13	7	1	8	2	9	3	10	4	11	5	12
10	Ik	14	8	2	9	3	10	4	11	5	12	6	13
11	Akbal	1	8	2	9	3	10	4	11	5	12	6	13
12	Kan	2	9	3	10	4	11	5	12	6	13	7	1
13	Chicchan	3	10	4	11	5	12	6	13	7	1	8	2
14	Cimi	4	11	5	12	6	13	7	1	8	2	9	3
15	Manik	5	12	6	13	7	1	8	2	9	3	10	4
16	Lamat	6	13	7	1	8	2	9	3	10	4	11	5
17	Muluc	7	1	8	2	9	3	10	4	11	5	12	6
18	Oe	8	2	9	3	10	4	11	5	12	6	13	7
19	Chuen	9	3	10	4	11	5	12	6	13	7	1	8

	Names of the months.												Pop.
	<i>Names of</i>												

## 17TH YEAR.

	Names of the months.											
	Names of the days.											
0	Ik	5	12	6	13	7	1	8	2	9	3	10
1	Akbal	6	13	7	1	8	2	9	3	10	4	11
2	Kan	7	1	8	2	9	3	10	4	11	5	12
3	Chicchan	8	2	9	3	10	4	11	5	12	6	13
4	Cimi	9	3	10	4	11	5	12	6	13	7	1
5	Manik	10	4	11	5	12	6	13	7	1	8	2
6	Lamat	11	5	12	6	13	7	1	8	2	9	3
7	Muluo	12	6	13	7	1	8	2	9	3	10	4
8	Oc	13	7	1	8	2	9	3	10	4	11	5
9	Chuen	1	8	2	9	3	10	4	11	5	12	6
10	Eb	2	9	3	10	4	11	5	12	6	13	7
11	Ben	3	10	4	11	5	12	6	13	7	1	8
12	Ix	4	11	5	12	6	13	7	1	8	2	9
13	Men	5	12	6	13	7	1	8	2	9	3	10
14	Cib	6	13	7	1	8	2	9	3	10	4	11
15	Caban	7	1	8	2	9	3	10	4	11	5	12
16	Ezenab	8	2	9	3	10	4	11	5	12	6	13
17	Cauac	9	3	10	4	11	5	12	6	13	7	1
18	Ahau	10	4	11	5	12	6	13	7	1	8	2
19	Ymix	11	5	12	6	13	7	1	8	2	9	3

## 19TH YEAR.

	Names of the months.											
	Names of the days.											
0	Eb	7	1	8	2	9	3	10	4	11	5	12
1	Ben	8	2	9	3	10	4	11	5	12	6	13
2	Ix	9	3	10	4	11	5	12	6	13	7	1
3	Men	10	4	11	5	12	6	13	7	1	8	2
4	Cib	11	5	12	6	13	7	1	8	2	9	3
5	Caban	12	6	13	7	1	8	2	9	3	10	4
6	Ezenab	13	7	1	8	2	9	3	10	4	11	5
7	Cauac	1	8	2	9	3	10	4	11	5	12	6
8	Ahau	2	9	3	10	4	11	5	12	6	13	7
9	Ymix	3	10	4	11	5	12	6	13	7	1	8
10	Il	4	11	5	12	6	13	7	1	8	2	9
11	Akbal	5	12	6	13	7	1	8	2	9	3	10
12	Kan	6	13	7	1	8	2	9	3	10	4	11
13	Chicchan	7	1	8	2	9	3	10	4	11	5	12
14	Cimi	8	2	9	3	10	4	11	5	12	6	13
15	Manik	9	3	10	4	11	5	12	6	13	7	1
16	Lamat	10	4	11	5	12	6	13	7	1	8	2
17	Muluo	11	5	12	6	13	7	1	8	2	9	3
18	Oc	12	6	13	7	1	8	2	9	3	10	4
19	Chuen	13	7	1	8	2	9	3	10	4	11	5

## 18TH YEAR.

	Names of the months.											
	Names of the days.											
0	Manik	6	13	7	1	8	2	9	3	10	4	11
1	Lamat	7	1	8	2	9	3	10	4	11	5	12
2	Muluo	8	2	9	3	10	4	11	5	12	6	13
3	Oc	9	3	10	4	11	5	12	6	13	7	1
4	Chuen	10	4	11	5	12	6	13	7	1	8	2
5	Eb	11	5	12	6	13	7	1	8	2	9	3
6	Ben	12	6	13	7	1	8	2	9	3	10	4
7	Ix	13	7	1	8	2	9	3	10	4	11	5
8	Men	1	8	2	9	3	10	4	11	5	12	6
9	Cib	2	9	3	10	4	11	5	12	6	13	7
10	Caban	3	10	4	11	5	12	6	13	7	1	8
11	Ezenab	4	11	5	12	6	13	7	1	8	2	9
12	Cauac	5	12	6	13	7	1	8	2	9	3	10
13	Ahau	6	13	7	1	8	2	9	3	10	4	11
14	Ymix	7	1	8	2	9	3	10	4	11	5	12
15	Ik	8	2	9	3	10	4	11	5	12	6	13
16	Akbal	9	3	10	4	11	5	12	6	13	7	1
17	Kan	10	4	11	5	12	6	13	7	1	8	2
18	Chicchan	11	5	12	6	13	7	1	8	2	9	3
19	Cimi	12	6	13	7	1	8	2	9	3	10	4

	Names of the months.											
	Names of the days.											
0	Caban	8	2	9	3	10	4	11	5	12	6	13
1	Ezenab	9	3	10	4	11	5	12	6	13	7	1
2	Cauac	10	4	11	5	12	6	13	7	1	8	2
3	Ahau	11	5	12	6	13	7	1	8	2	9	3
4	Ymix	12	6	13	7	1	8	2				

## ARCHAIC ANNUAL CALENDAR.

7301

## 21ST YEAR.

	Names of the months.												
	Names of the days.												
0	Ik	9	3	10	4	11	5	12	6	13	7	1	8
1	Akbal	10	4	11	5	12	6	13	7	1	8	2	9
2	Kan	11	5	12	6	13	7	1	8	2	9	3	10
3	Chicchan	12	6	13	7	1	8	2	9	3	10	4	11
4	Chuen	13	7	1	8	2	9	3	10	4	11	5	12
5	Manik	1	8	2	9	3	10	4	11	5	12	6	13
6	Lamat	2	9	3	10	4	11	5	12	6	13	7	1
7	Muluc	3	10	4	11	5	12	6	13	7	1	8	2
8	Oc	4	11	5	12	6	13	7	1	8	2	9	3
9	Chuen	5	12	6	13	7	1	8	2	9	3	10	4
10	Eb	6	13	7	1	8	2	9	3	10	4	11	5
11	Ben	7	1	8	2	9	3	10	4	11	5	12	6
12	Ix	8	2	9	3	10	4	11	5	12	6	13	7
13	Men	9	3	10	4	11	5	12	6	13	7	1	8
14	Cib	10	4	11	5	12	6	13	7	1	8	2	9
15	Caban	11	5	12	6	13	7	1	8	2	9	3	10
16	Ezenab	12	6	13	7	1	8	2	9	3	10	4	11
17	Cauac	13	7	1	8	2	9	3	10	4	11	5	12
18	Ahau	1	8	2	9	3	10	4	11	5	12	6	13
19	Ymix	2	9	3	10	4	11	5	12	6	13	7	1

## ARCHAIC ANNUAL CALENDAR.

23RD YEAR.

	Names of the months.												
	Names of the days.												
0	Eb	11	5	12	6	13	7	1	8	2	9	3	10
1	Ben	12	6	13	7	1	8	2	9	3	10	4	11
2	Ix	13	7	1	8	2	9	3	10	4	11	5	12
3	Men	1	8	2	9	3	10	4	11	5	12	6	13
4	Cib	2	9	3	10	4	11	5	12	6	13	7	1
5	Caban	3	10	4	11	5	12	6	13	7	1	8	2
6	Ezenab	4	11	5	12	6	13	7	1	8	2	9	3
7	Cauac	5	12	6	13	7	1	8	2	9	3	10	4
8	Ahau	6	13	7	1	8	2	9	3	10	4	11	5
9	Ymix	7	1	8	2	9	3	10	4	11	5	12	6
10	Ik	8	2	9	3	10	4	11	5	12	6	13	7
11	Akbal	9	3	10	4	11	5	12	6	13	7	1	8
12	Kan	10	4	11	5	12	6	13	7	1	8	2	9
13	Chicchan	11	5	12	6	13	7	1	8	2	9	3	10
14	Cimi	12	6	13	7	1	8	2	9	3	10	4	11
15	Manik	13	7	1	8	2	9	3	10	4	11	5	12
16	Lamat	1	8	2	9	3	10	4	11	5	12	6	13
17	Muluc	2	9	3	10	4	11	5	12	6	13	7	1
18	Oc	3	10	4	11	5	12	6	13	7	1	8	2
19	Chuen	4	11	5	12	6	13	7	1	8	2	9	3

## 22ND YEAR.

7666

	Names of the months.												
	Names of the days.												
0	Mainil	10	4	11	5	12	6	13	7	1	8	2	9
1	Lamat	11	5	12	6	13	7	1	8	2	9	3	10
2	Muluc	12	6	13	7	1	8	2	9	3	10	4	11
3	Oc	13	7	1	8	2	9	3	10	4	11	5	12
4	Chuen	1	8	2	9	3	10	4	11	5	12	6	13
5	Eb	2	9	3	10	4	11	5	12	6	13	7	1
6	Ben	3	10	4	11	5	12	6	13	7	1	8	2
7	Ix	4	11	5	12	6	13	7	1	8	2	9	3
8	Men	5	12	6	13	7	1	8	2	9	3	10	4
9	Cib	6	13	7	1	8	2	9	3	10	4	11	5
10	Caban	7	1	8	2	9	3	10	4	11	5	12	6
11	Ezenab	8	2	9	3	10	4	11	5	12	6	13	7
12	Cauac	9	3	10	4	11	5	12	6	13	7	1	8
13	Ahau	10	4	11	5	12	6	13	7	1	8	2	9
14	Ymix	11	5	12	6	13	7	1	8	2	9	3	10
15	Ik	12	6	13	7	1	8	2	9	3	10	4	11
16	Akbal	13	7	1	8	2	9	3	10	4	11	5	12
17	Kan	1	8	2	9	3	10	4	11	5	12	6	13
18	Chicchan	2	9	3	10	4	11	5	12	6	13	7	1
19	Cimi	3	10	4	11	5	12	6	13	7	1	8	2

## 24TH YEAR.

8396

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## ARCHAIC ANNUAL CALENDAR.

## 25TH YEAR.

8761

	Names of the months.	Names of the days.	9.2.3. Pop.	8.3.14. Uo.	9.12.14. Zip.	8.14.5. Zott.	10.3.5. Tzec.	8.6.8. Yaxkin.	9.11.9. Mol.	8.6.8. Chen.	9.18.0. Mac.	9.10.2. Pax.	8.11.13. Kayab.	10.5.9. Yax.	10.8.1. Muun.	8.17.0. Uayeb.		
0	Ik .....	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	0
1	Akbal .....	1	8	2	9	3	10	4	11	5	12	6	13	7	1	2	1	0
2	Kan .....	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	0
3	Chicchan .....	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	1	0
4	Cimi .....	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	2	0
5	Mani .....	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	3	0
6	Lamat .....	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	4	0
7	Muluc .....	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	5	0
8	Oc .....	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	0
9	Chuen .....	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	0
10	Eb .....	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	0
11	Ben .....	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	0
12	Ix .....	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	0
13	Men .....	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	0
14	Cib .....	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	0
15	Caban .....	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	0
16	Ezenab .....	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	0
17	Cauac .....	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	0
18	Ahau .....	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	0
19	Ymix .....	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	0

## 26TH YEAR.

9126

	Names of the months.	Names of the days.	9.2.4. Pop.	8.3.15. Uo.	9.12.15. Zip.	8.14.6. Zott.	10.3.6. Tzec.	8.6.8. Yaxkin.	9.11.9. Mol.	8.6.8. Chen.	9.18.1. Mac.	9.10.3. Pax.	8.11.14. Kayab.	10.0.14. Cunhun.	10.8.12. Muun.	8.17.0. Uayeb.		
0	Manik .....	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	0	
1	Lamat .....	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	0	
2	Muluc .....	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	0	
3	Oc .....	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	0	
4	Chuen .....	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	0	
5	Eb .....	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	0	
6	Ben .....	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	0	
7	Ix .....	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	0	
8	Men .....	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	0	
9	Cib .....	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	0	
10	Caban .....	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	0	
11	Ezenab .....	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	0	
12	Cauac .....	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	0	
13	Ahau .....	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	0
14	Ymix .....	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	0
15	Ik .....	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	0
16	Akbal .....	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	0
17	Kan .....	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	0
18	Chicchan .....	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	0
19	Cimi .....	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	0

## ARCHAIC ANNUAL CALENDAR.

## 27TH YEAR.

9491

	Names of the months.	Names of the days.	9.2.5. Pop.	8.3.16. Uo.	9.12.16. Zip.	8.17.0. Chen.	10.3.7. Tzec.	9.14.8. Xul.	9.15.9. Mol.	8.6.9. Yaxkin.	9.17.1. Zee.	9.18.2. Mac.	9.10.4. Pax.	8.11.15. Kayab.	10.0.15. Cunhun.	8.12.13. Muun.	9.13.14. Uayeb.	
0	Eb .....	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	0
1	Ben .....	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	1
2	Ix .....	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	2
3	Men .....	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	

## ARCHAIC ANNUAL CALENDAR.

10221

29TH YEAR.

	Names of the months.												
0	Ik	4	11	5	12	6	13	7	1	8	2	9	3
1	Akbal	5	12	6	13	7	1	8	2	9	3	10	4
2	Kan	6	13	7	1	8	2	9	3	10	4	11	5
3	Chiechan	7	1	8	2	9	3	10	4	11	5	12	6
4	Cimi	8	2	9	3	10	4	11	5	12	6	13	7
5	Manik	9	3	10	4	11	5	12	6	13	7	1	8
6	Lamat	10	4	11	5	12	6	13	7	1	8	2	9
7	Muluc	11	5	12	6	13	7	1	8	2	9	3	10
8	Oc	12	6	13	7	1	8	2	9	3	10	4	11
9	Chuen	13	7	1	8	2	9	3	10	4	11	5	12
10	Eb	1	8	2	9	3	10	4	11	5	12	6	13
11	Ben	2	9	3	10	4	11	5	12	6	13	7	1
12	Ix	3	10	4	11	5	12	6	13	7	1	8	2
13	Men	4	11	5	12	6	13	7	1	8	2	9	3
14	Cib	5	12	6	13	7	1	8	2	9	3	10	4
15	Caban	6	13	7	1	8	2	9	3	10	4	11	5
16	Ezbanab	7	1	8	2	9	3	10	4	11	5	12	6
17	Cauac	8	2	9	3	10	4	11	5	12	6	13	7
18	Ahau	9	3	10	4	11	5	12	6	13	7	1	8
19	Ymix	10	4	11	5	12	6	13	7	1	8	2	9

## ARCHAIC ANNUAL CALENDAR.

31ST YEAR.

	Names of the months.												
0	Eb	6	13	7	1	8	2	9	3	10	4	11	5
1	Ben	7	1	8	2	9	3	10	4	11	5	12	6
2	Ix	8	2	9	3	10	4	11	5	12	6	13	7
3	Men	9	3	10	4	11	5	12	6	13	7	1	8
4	Cib	10	4	11	5	12	6	13	7	1	8	2	9
5	Caban	11	5	12	6	13	7	1	8	2	9	3	10
6	Ezbanab	12	6	13	7	1	8	2	9	3	10	4	11
7	Cauac	13	7	1	8	2	9	3	10	4	11	5	12
8	Ahau	1	8	2	9	3	10	4	11	5	12	6	13
9	Ymix	2	9	3	10	4	11	5	12	6	13	7	1
10	Ik	3	10	4	11	5	12	6	13	7	1	8	2
11	Akbal	4	11	5	12	6	13	7	1	8	2	9	3
12	Kan	5	12	6	13	7	1	8	2	9	3	10	4
13	Chiechan	6	13	7	1	8	2	9	3	10	4	11	5
14	Cimi	7	1	8	2	9	3	10	4	11	5	12	6
15	Manik	8	2	9	3	10	4	11	5	12	6	13	7
16	Lamat	9	3	10	4	11	5	12	6	13	7	1	8
17	Muluc	10	4	11	5	12	6	13	7	1	8	2	9
18	Oc	11	5	12	6	13	7	1	8	2	9	3	10
19	Chuen	12	6	13	7	1	8	2	9	3	10	4	11

30TH YEAR.

10586

	Names of the months.												
0	Manik	5	12	6	13	7	1	8	2	9	3	10	4
1	Lamat	6	13	7	1	8	2	9	3	10	4	11	5
2	Muluc	7	1	8	2	9	3	10	4	11	5	12	6
3	Oc	8	2	9	3	10	4	11	5	12	6	13	7
4	Chuen	9	3	10	4	11	5	12	6	13	7	1	8
5	Eb	10	4	11	5	12	6	13	7	1	8	2	9
6	Ben	11	5	12	6	13	7	1	8	2	9	3	10
7	Ix	12	6	13	7	1	8	2	9	3	10	4	11
8	Men	13	7	1	8	2	9	3	10	4	11	5	12
9	Cib	1	8	2	9	3	10	4	11	5	12	6	13
10	Caban	2	9	3	10	4	11	5	12	6	13	7	1
11	Ezbanab	3	10	4	11	5	12	6	13	7	1	8	2
12	Cauac	4	11	5	12	6	13	7	1	8	2	9	3
13	Ahau	5	12	6	13	7	1	8	2	9	3	10	4
14	Ymix	6	13	7	1	8	2	9	3	10	4	11	5
15	Ik	7	1	8	2	9	3	10	4	11	5	12	6
16	Akbal	8	2	9	3	10	4	11	5	12	6	13	7
17	Kan	9	3	10	4	11	5	12	6	13	7	1	8
18	Chiechan	10	4	11	5	12	6	13	7	1	8	2	9
19	Cimi	11	5	12	6	13	7	1	8	2	9	3	10

	Names of the months.												
0	Caban	7	1	8	2	9	3	10	4	11	5	12	6
1	Ezbanab	8	2	9	3	10	4	11	5	12	6	13	7
2	Cauac	9	3	10	4	11	5	12	6	13	7	1	8
3	Ahau	10	4	11									

## ARCHAIC ANNUAL CALENDAR.

11687

33RD YEAR.

		Names of the months.	
<i>Names of the days.</i>			
0	Ik	8	2
1	Akbal	9	3
2	Kan	10	4
3	Chicchan	11	5
4	Cimi	12	6
5	Manik	13	7
6	Lamat	1	8
7	Muluc	2	9
8	Oc	3	10
9	Chuen	4	11
10	Eb	5	12
11	Ben	6	13
12	Ix	7	1
13	Men	8	2
14	Cib	9	3
15	Caban	10	4
16	Eznenab	11	5
17	Canao	12	6
18	Ahau	13	7
19	Ymix	1	8
		9	9
		10	10
		11	11
		12	12
		13	13
		14	14
		15	15
		16	16
		17	17
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13141

37TH YEAR.

	Names of the months.											
	Names of the days.											
0	Ik	12	6	13	7	1	8	2	9	3	10	4
1	Akbal	13	7	1	8	2	9	3	10	4	11	5
2	Kan	1	8	2	9	3	10	4	11	5	12	6
3	Chicchan	2	9	3	10	4	11	5	12	6	13	7
4	Cimi	3	10	4	11	5	12	6	13	7	1	8
5	Manik	4	11	5	12	6	13	7	1	8	2	9
6	Lamat	5	12	6	13	7	1	8	2	9	3	10
7	Muluc	6	13	7	1	8	2	9	3	10	4	11
8	Oo	7	1	8	2	9	3	10	4	11	5	12
9	Chuen	8	2	9	3	10	4	11	5	12	6	13
10	Eb	9	3	10	4	11	5	12	6	13	7	1
11	Bon	10	4	11	5	12	6	13	7	1	8	2
12	Ix	11	5	12	6	13	7	1	8	2	9	3
13	Men	12	6	13	7	1	8	2	9	3	10	4
14	Cib	13	7	1	8	2	9	3	10	4	11	5
15	Caban	1	8	2	9	3	10	4	11	5	12	6
16	Eznenab	2	9	3	10	4	11	5	12	6	13	7
17	Caucan	3	10	4	11	5	12	6	13	7	1	8
18	Ahau	4	11	5	12	6	13	7	1	8	2	9
19	Ymix	5	12	6	13	7	1	8	2	9	3	10

13306

38TH YEAR.

	Names of the months.											
	Names of the days.											
0	Manik	13	7	1	8	2	9	3	10	4	11	5
1	Lamat	1	8	2	9	3	10	4	11	5	12	6
2	Muluc	2	9	3	10	4	11	5	12	6	13	7
3	Oo	3	10	4	11	5	12	6	13	7	1	8
4	Chuen	4	11	5	12	6	13	7	1	8	2	9
5	Eb	5	12	6	13	7	1	8	2	9	3	10
6	Ben	6	13	7	1	8	2	9	3	10	4	11
7	Ix	7	1	8	2	9	3	10	4	11	5	12
8	Mon	8	2	9	3	10	4	11	5	12	6	13
9	Cib	9	3	10	4	11	5	12	6	13	7	1
10	Caban	10	4	11	5	12	6	13	7	1	8	2
11	Eznenab	11	5	12	6	13	7	1	8	2	9	3
12	Cauac	12	6	13	7	1	8	2	9	3	10	4
13	Ahau	13	7	1	8	2	9	3	10	4	11	5
14	Ymix	1	8	2	9	3	10	4	11	5	12	6
15	Ik	2	9	3	10	4	11	5	12	6	13	7
16	Akbal	3	10	4	11	5	12	6	13	7	1	8
17	Kan	4	11	5	12	6	13	7	1	8	2	9
18	Chicchan	5	12	6	13	7	1	8	2	9	3	10
19	Cimi	6	13	7	1	8	2	9	3	10	4	11

1:48

1:49

13871

39TH YEAR.

	Names of the months.											
	Names of the days.											
0	Eb	1	8	2	9	3	10	4	11	5	12	6
1	Ben	2	9	3	10	4	11	5	12	6	13	7
2	Ix	3	10	4	11	5	12	6	13	7	1	8
3	Men	4	11	5	12	6	13	7	1	8	2	9
4	Cib	5	12	6	13	7	1	8	2	9	3	10
5	Caban	6	13	7	1	8	2	9	3	10	4	11
6	Eznenab	7	1	8	2	9	3	10	4	11	5	12
7	Cauac	8	2	9	3	10	4	11	5	12	6	13
8	Ahau	9	3	10	4	11	5	12	6	13	7	1
9	Ymix	10	4	11	5	12	6	13	7	1	8	2
10	Ik	11	5	12	6	13	7	1	8	2	9	3
11	Akbal	12	6	13	7	1	8	2	9	3	10	4
12	Kan	13	7	1	8	2	9	3	10	4	11	5
13	Chiechan	1	8	2	9	3	10	4	11	5	12	6
14	Cimi	2	9	3	10	4	11	5	12	6	13	7
15	Manik	3	10	4	11	5	12	6	13	7	1	8
16	Lamat	4	11	5	12	6	13	7	1	8	2	9
17	Muluc	5	12	6	13	7	1	8	2	9	3	10
18	Oo	6	13	7	1	8	2	9	3	10	4	11
19	Chuen	7	1	8	2	9	3	10	4	11	5	12

14236

40TH YEAR.

	Names of the months.											
	Names of the days.											
0	Caban	2	9	3	10	4	11	5	12	6	13	7
1	Eznenab	3	10	4	11	5	12	6	13	7	1	8
2	Cauac	4	11	5	12</							

	Names of the months.																				
	Names of the days.																				
0	Ik	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	0
1	Akbal	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	1
2	Kan	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	2	3
3	Chicchan	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	3
4	Cimi	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	4
5	Manik	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	5
6	Lamat	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	6
7	Muluc	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	7
8	Oe	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	8
9	Chuen	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	9
10	Eb	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	10
11	Ben	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	11
12	Ix	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	12
13	Men	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	13
14	Cib	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	14
15	Caban	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8
16	Ezenab	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9
17	Cauac	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10
18	Ahau	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11
19	Ymix	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12

	Names of the months.																				
	Names of the days.																				
0	Eb	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	0
1	Ben	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	1
2	Ix	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	2
3	Men	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	3
4	Cib	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	4
5	Caban	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	5
6	Ezenab	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	6
7	Cauac	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	7
8	Ahau	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	8
9	Ymix	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	9
10	Ik	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	10
11	Akbal	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	11
12	Kan	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	12
13	Chicchan	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	13	14
14	Cimi	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	14
15	Manik	7	1	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	15
16	Lamat	8	2	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	16
17	Muluc	9	3	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	17
18	Oe	10	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	18
19	Chuen	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	7	19

	Names of the months.																				
	Names of the days.																				
0	Manik	4	11	5	12	6	13	7	1	8	2	9	3	10	4	11	5	12	6	13	0
1	Lamat	5	12	6	13	7	1	8	2	9</td											

16061

45TH YEAR.

	Names of the months.											
	Names of the days.											
0	Ik	7	1	8	2	9	3	10	4	11	5	12
1	Akbal	8	2	9	3	10	4	11	5	12	6	13
2	Kan	9	3	10	4	11	5	12	6	13	7	1
3	Chicchan	10	4	11	5	12	6	13	7	1	8	2
4	Cimi	11	5	12	6	13	7	1	8	2	9	3
5	Manik	12	6	13	7	1	8	2	9	3	10	4
6	Lamat	13	7	1	8	2	9	3	10	4	11	5
7	Muluc	1	8	2	9	3	10	4	11	5	12	6
8	Oc	2	9	3	10	4	11	5	12	6	13	7
9	Chuen	3	10	4	11	5	12	6	13	7	1	8
10	Eb	4	11	5	12	6	13	7	1	8	2	9
11	Ben	5	12	6	13	7	1	8	2	9	3	10
12	Ix	6	13	7	1	8	2	9	3	10	4	11
13	Kan	7	1	8	2	9	3	10	4	11	5	12
14	Chicchan	8	2	9	3	10	4	11	5	12	6	13
15	Cimi	9	3	10	4	11	5	12	6	13	7	1
16	Manik	10	4	11	5	12	6	13	7	1	8	2
17	Lamat	11	5	12	6	13	7	1	8	2	9	3
18	Oc	12	6	13	7	1	8	2	9	3	10	4
19	Chuen	13	7	1	8	2	9	3	10	4	11	5

47TH YEAR.

	Names of the months.											
	Names of the days.											
0	Eb	9	3	10	4	11	5	12	6	13	7	1
1	Ben	10	4	11	5	12	6	13	7	1	8	2
2	Ix	11	5	12	6	13	7	1	8	2	9	3
3	Men	12	6	13	7	1	8	2	9	3	10	4
4	Cib	13	7	1	8	2	9	3	10	4	11	5
5	Caban	1	8	2	9	3	10	4	11	5	12	6
6	Ezenab	2	9	3	10	4	11	5	12	6	13	7
7	Cauac	3	10	4	11	5	12	6	13	7	1	8
8	Ahau	4	11	5	12	6	13	7	1	8	2	9
9	Ymix	5	12	6	13	7	1	8	2	9	3	10
10	Ik	6	13	7	1	8	2	9	3	10	4	11
11	Akbal	7	1	8	2	9	3	10	4	11	5	12
12	Kan	8	2	9	3	10	4	11	5	12	6	13
13	Chicchan	9	3	10	4	11	5	12	6	13	7	1
14	Cimi	10	4	11	5	12	6	13	7	1	8	2
15	Manik	11	5	12	6	13	7	1	8	2	9	3
16	Lamat	12	6	13	7	1	8	2	9	3	10	4
17	Oc	13	7	1	8	2	9	3	10	4	11	5
18	Chuen	1	8	2	9	3	10	4	11	5	12	6

16426

46TH YEAR.

	Names of the months.											
	Names of the days.											
0	Manik	8	2	9	3	10	4	11	5	12	6	13
1	Lamat	9	3	10	4	11	5	12	6	13	7	1
2	Muluc	10	4	11	5	12	6	13	7	1	8	2
3	Oc	11	5	12	6	13	7	1	8	2	9	3
4	Chuen	12	6	13	7	1	8	2	9	3	10	4
5	Eb	13	7	1	8	2	9	3	10	4	11	5
6	Ben	1	8	2	9	3	10	4	11	5	12	6
7	Ix	2	9	3	10	4	11	5	12	6	13	7
8	Mon	3	10	4	11	5	12	6	13	7	1	8
9	Cib	4	11	5	12	6	13	7	1	8	2	9
10	Caban	5	12	6	13	7	1	8	2	9	3	10
11	Ezenab	6	13	7	1	8	2	9	3	10	4	11
12	Cauac	7	1	8	2	9	3	10	4	11	5	12
13	Ahau	8	2	9	3	10	4	11	5	12	6	13
14	Ymix	9	3	10	4	11	5	12	6	13	7	1
15	Ik	10	4	11	5	12	6	13	7	1	8	2
16	Akbal	11	5	12	6	13	7	1	8	2	9	3
17	Kan	12	6	13	7	1	8	2	9	3	10	4
18	Chicchan	13	7	1	8	2	9	3	10	4	11	5
19	Cimi	1	8	2	9	3	10	4	11	5	12	6

	Names of the months.											
	Names of the days.											
0	Caban	10	4	11	5	12	6	13	7	1	8	2
1	Ezenab	11	5	12	6	13	7	1	8	2	9	3
2	Cauac	12	6	13	7	1	8	2	9	3	10	4
3	Ahau	13	7	1	8	2	9	3	10	4	11	5
4	Ymix	1	8	2	9	3	10	4	11	5	12	6
5	Ik	2	9	3	10</							

	Names of the months.											
	Names of the days.											
0	Ik	11	5	12	6	13	7	1	8	2	9	3
1	Akbal	12	6	13	7	1	8	2	9	3	10	4
2	Kan	13	7	1	8	2	9	3	10	4	11	5
3	Chicchan	1	8	2	9	3	10	4	11	5	12	6
4	Cimi	2	9	3	10	4	11	5	12	6	13	7
5	Manik	3	10	4	11	5	12	6	13	7	1	8
6	Lamat	4	11	5	12	6	13	7	1	8	2	9
7	Muluc	5	12	6	13	7	1	8	2	9	3	10
8	Oc	6	13	7	1	8	2	9	3	10	4	11
9	Chuen	7	1	8	2	9	3	10	4	11	5	12
10	Eb	8	2	9	3	10	4	11	5	12	6	13
11	Ben	9	3	10	4	11	5	12	6	13	7	1
12	Ix	10	4	11	5	12	6	13	7	1	8	2
13	Men	11	5	12	6	13	7	1	8	2	9	3
14	Cib	12	6	13	7	1	8	2	9	3	10	4
15	Caban	13	7	1	8	2	9	3	10	4	11	5
16	Eznenab	1	8	2	9	3	10	4	11	5	12	6
17	Cauac	2	9	3	10	4	11	5	12	6	13	7
18	Ahau	3	10	4	11	5	12	6	13	7	1	8
19	Ymix	4	11	5	12	6	13	7	1	8	2	9

	Names of the months.											
	Names of the days.											
0	Eb	13	7	1	8	2	9	3	10	4	11	5
1	Ben	1	8	2	9	3	10	4	11	5	12	6
2	Ix	2	9	3	10	4	11	5	12	6	13	7
3	Men	3	10	4	11	5	12	6	13	7	1	8
4	Cib	4	11	5	12	6	13	7	1	8	2	9
5	Caban	5	12	6	13	7	1	8	2	9	3	10
6	Eznenab	6	13	7	1	8	2	9	3	10	4	11
7	Cauac	7	1	8	2	9	3	10	4	11	5	12
8	Ahau	8	2	9	3	10	4	11	5	12	6	13
9	Ymix	9	3	10	4	11	5	12	6	13	7	1
10	Ik	10	4	11	5	12	6	13	7	1	8	2
11	Akbal	11	5	12	6	13	7	1	8	2	9	3
12	Kan	12	6	13	7	1	8	2	9	3	10	4
13	Chicchan	13	7	1	8	2	9	3	10	4	11	5
14	Cimi	1	8	2	9	3	10	4	11	5	12	6
15	Manik	2	9	3	10	4	11	5	12	6	13	7
16	Lamat	3	10	4	11	5	12	6	13	7	1	8
17	Muluc	4	11	5	12	6	13	7	1	8	2	9
18	Oc	5	12	6	13	7	1	8	2	9	3	10
19	Chuen	6	13	7	1	8	2	9	3	10	4	11

	Names of the months.											
	Names of the days.											
0	Manik	12	8	7	12	Pop.	9	16	1	Uo.	8	17
1	Lamat	13	7	1	8	2	9	3	10	4	11	5
2	Muluc	1	8	2	9	3	10	4	11	5	12	6
3	Oc	2	9	3	10	4	11	5	12	6	13	7
4	Chuen	3	10	4	11	5	12	6	13	7	1	8
5	Eb	4	11	5	12	6	13	7	1	8	2	9
6	Ben	5	12	6	13	7	1	8	2	9	3	10
7	Ix	6	13	7	1	8	2	9	3	10	4	11
8	Men	7	1	8	2	9	3	10	4	11	5	12
9	Cib	8	2	9	3	10	4	11	5	12	6	13
10	Caban	9	3	10	4	11	5	12	6	13	7	1
11	Eznenab	10	4	11	5	12	6	13	7	1	8	2
12	Cauac	11	5	12	6	13	7	1	8	2	9	3
13	Ahau	12	6	13	7	1	8	2	9	3	10	4
14	Ymix	13	7	1	8	2	9	3	10	4	11	5
15	Ik	1	8	2	9	3	10	4	11	5	12	6
16	Akbal	2	9	3	10	4	11	5	12	6	13	7
17	Kan	3	10	4	11	5	12	6	13	7	1	8
18	Chicchan	4	11	5	12	6	13	7	1	8	2	9
19	Cimi	5	12	6	13	7	1	8	2	9	3	10

	Names of the months.											
	Names of the days.											
0	Caban	1	8	2	9	3	10	4	11	5	12	6
1	Eznenab	2	9	3	10	4	11	5	12	6	13	7
2	Cauac	3	10	4	11	5	12	6	13	7	1	8
3	Ahau	4	11	5	12	6	13	7	1	8	2	9
4	Ymix	5										

## Appendix E A method for the quick computation of Calendar Round positions. By John S. Justeson

The accompanying tables are designed to allow the quick computation of the positions of Maya dates within the Calendar Round of 18,980 days; and therefore of the temporal distance between any two Calendar Round dates. The date 1 Imix 4 Uayeb is taken as the starting point (CR = 1), and the final date in the round therefore is 13 Ahau 3 Uayeb (CR = 18,980).

The CR positions are calculated in four steps:

1. Look up the position of the date in the Sacred Round in table I, and set SR equal to this quantity. Look up the position of the date in the Vague Year in table II, and set VY equal to that quantity.

2. If SR is as large as or larger than VY, set  $SR^* = SR$ . If SR is not as large as VY, add to SR the smallest multiple of 260 (this will be 260 or 520) for which the sum is as large as or larger than VY; label this sum  $SR^*$ .

3. Find the difference,  $d = SR^* - VY$ . Look up this difference in table III. In the extreme left-hand column of the row in which the quantity  $d$  appears, is given the remainder of the quantity  $d$  after division by 52. Call this quantity  $r$ .

4. The CR value is equal to the quantity  $365 \times r + VY$ . Look up the value of  $r$  in table IV, and to the right is the quantity  $365 \times r$ . Adding VY to this yields the Calendar Round position.

Examples:

i. 2 Cimi 4 Xul

(1) SR = 106; VY = 106.

(2) Since SR is as large as VY,  $SR^* = 106$ .

(3)  $d = SR^* - VY = 106 - 106 = 0$

Now, in table III, 0 is already in the leftmost column, so  $r = 0$ .

(4) CR =  $365 \times 0 + 106 = 106$ .

Thus, 2 Cimi 4 Xul is the 106th day of the Calendar Round.

ii. 9 Ahau 3 Ceh

(1) SR = 100; VY = 225.

(2) Since SR is smaller than VY, we must add a multiple of 260 to it, to make it as large or larger.  $100 + 260 = 360$ , which is larger than our VY of 225, so  $SR^* = 360$ .

(3)  $d = SR^* - VY = 360 - 225 = 135$ . In the leftmost column of table III, opposite 135, we find 31; so  $r = 31$ .

(4) CR =  $365 \times 31 + 225 = 11,315 + 225 = 11,540$ .

Thus, 9 Ahau 3 Ceh is the 11,540th day of the Calendar Round.

Note: To calculate dates in the Yucatec "shifted" system, the values listed for VY in table II should be increased by one, and 3 Uayeb reassigned to the value VY = 1, so that CR = 1 for the date 1 Imix 3 Uayeb, and CR = 18,980 at 13 Ahau 2 Uayeb.

	1	2	3	4	5	6	7	8	9	10	11	12	13
<i>Imix</i>	1	41	81	121	161	201	241	21	61	101	141	181	221
<i>Ik</i>	222	2	42	82	122	162	202	242	22	62	102	142	182
<i>Akbal</i>	183	223	3	43	83	123	163	203	243	23	63	103	143
<i>Kan</i>	144	184	224	4	44	84	124	164	204	244	24	64	104
<i>Chicchan</i>	105	145	185	225	5	45	85	125	165	205	245	25	65
<i>Cimi</i>	66	106	146	186	226	6	46	86	126	166	206	246	26
<i>Manik</i>	27	67	107	147	187	227	7	47	87	127	167	207	247
<i>Lamat</i>	248	28	68	108	148	188	228	8	48	88	128	168	208
<i>Muluc</i>	209	249	29	69	109	149	189	229	9	49	89	129	169
<i>Oc</i>	170	210	250	30	70	110	150	190	230	10	50	90	130
<i>Chuen</i>	131	171	211	251	31	71	111	151	191	231	11	51	91
<i>Eb</i>	92	132	172	212	252	32	72	112	152	192	232	12	52
<i>Ben</i>	53	93	133	173	213	253	33	73	113	153	193	233	13
<i>Ix</i>	14	54	94	134	174	214	254	34	74	114	154	194	234
<i>Men</i>	235	15	55	95	135	175	215	255	35	75	115	155	195
<i>Cib</i>	196	236	16	56	96	136	176	216	256	36	76	116	156
<i>Coban</i>	157	197	237	17	57	97	137	177	217	257	37	77	117
<i>Etznab</i>	118	158	198	238	18	58	98	138	178	218	258	38	78
<i>Cauac</i>	79	119	159	199	239	19	59	99	139	179	219	259	39
<i>Ahau</i>	40	80	120	160	200	240	20	60	100	140	180	220	260

TABLE II THE VAGUE YEAR													
0	2	22	42	62	82	102	122	142	162	182	202	222	242
1	3	23	43	63	83	103	123	143	163	183	203	223	243
2	4	24	44	64	84	104	124	144	164	184	204	224	244
3	5	25	45	65	85	105	125	145	165	185	205	225	245
4	6	26	46	66	86	106	126	146	166	186	206	226	246
5	7	27	47	67	87	107	127	147	167	187	207	227	247
6	8	28	48	68	88	108	128	148	168	188	208	228	248
7	9	29	49	69	89	109	129	149	169	189	209	229	249
8	10	30	50	70	90	110	130	150	170	190	210	230	250
9	11	31	51	71	91	111	131	151	171	191	211	231	251
10	12	32	52	72	92	112	132	152	172	192	212	232	252
11	13	33	53	73	93	113	133	153	173	193	213	233	253
12	14	34	54	74	94	114	134	154	174	194	214	234	254
13	15	35	55	75	95	115	135	155	175	195	215	235	255
14	16	36	56	76	96	116	136	156	176	196	216	236	256
15	17	37	57	77	97	117	137	157	177	197	217	237	257
16	18	38	58	78	98	118	138	158	178	198	218	238	258
17	19	39	59	79	99	119	139	159	179	199	219	239	259
18	20	40	60	80	100	120	140	160	180	200	220	240	260
19	21	41	61	81	101	121	141	161	181	201	221	241	261

TABLE III REMAINDERS OF 52													
0	52	104	156	208	260	78	130	182	234				
1	53	105	157	209	261	79	131	183	235				
2	54	106	158	210	262	80	132	184	236				
3	55	107	159	211	263	81	133	185	237				
4	56	108	160	212	264	82</td							

There are those who would rather calculate dates than look them up in tables. Thompson (1941) has explained fully the use of a 364-day calculating year: it makes possible rapid calculations, and may have been used for this purpose in antiquity.

Justeson's tables can be expressed arithmetically as follows:

$$\begin{aligned} SR &\equiv 40(t - v) + v \pmod{260} \\ VR &\equiv 2 + p + 20(m - 1) \pmod{365} \\ r &\equiv SR - VY \pmod{52} \\ CR &= 365 \times r + VY \end{aligned}$$

where  $t$  (for trecena) is the day number (1 - 13)

$v$  for ventena) is the position of the day in the sequence Imix to Ahau, as listed in table I (1 - 20)

$p$  is the position in the month (0 - 19)

$m$  is the position of the month in the sequence Pop to Uayeb, as listed in the table II (1 - 19)

A word of explanation concerning the notation may not come amiss. In modular arithmetic the expression  $x \equiv y \pmod{z}$ , which is read as  $x$  is congruent to  $y$  modulus  $z$ , is equivalent to the statement " $x - y$  is divisible by  $z$ ;" or rather less formally as " $y$  is the remainder when  $x$  is divided by  $z$  as many times as it will go." When  $x$  is negative, then  $z$  or a multiple of  $z$  must be added to it.

When the distance between two CR dates is required, and their positions in the round do not have to be known, the following version of the equations can be employed:

$$\begin{aligned} \Delta SR &\equiv 40[(t_2 - t_1) - (v_2 - v_1)] + (v_2 - v_1) \\ \Delta VY &\equiv (p_2 - p_1) + 20(m_2 - m_1) \\ r &\equiv SR - VY \pmod{52} \\ \Delta CR &\equiv 365 \times r + VY \end{aligned}$$

Since the answer may be a figure of several thousand days, it is often convenient to use table V to convert the figure into Maya notation. The table is useful also when a Long Count date is to be converted into days, as when the corresponding date in the Julian calendar is required. According to the Thompson correlation, the Julian Day number equals the Maya date expressed in days plus 584,283.

TABLE V	Baktuns	Katuns	Tuns	Uinals
1	144,000	7,200	360	20
2	288,000	14,400	720	40
3	432,000	21,600	1,080	60
4	576,000	28,800	1,440	80
5	720,000	36,000	1,800	100
6	864,000	43,200	2,160	120
7	1,008,000	50,400	2,520	140
8	1,152,000	57,600	2,880	160
9	1,296,000	64,800	3,240	180
10	1,440,000	72,000	3,600	200
11	1,584,000	79,200	3,960	220
12	1,728,000	86,400	4,320	240
13	1,872,000	93,600	4,680	260
14	100,800	5,040	280	
15	108,000	5,400	300	
16	115,200	5,760	320	
17	122,400	6,120	340	
18	129,600	6,480	360	
19	136,800	6,840		
20	144,000	7,200		

## Appendix F MOON AGE TABLES, By Lawrence Roys

Following Goodman's idea of giving Maya dates in tabular form, I present here a chart which links the age of the moon to a series of Maya dates. This table provides a quick method for obtaining the desired moon age for a given Maya date without converting it into Arabic notation. It is a series of Long-Count dates, each accompanied by its moon age. They are close enough together to yield a date of known moon age conveniently near any given date of which the moon age is unknown. Further columns are added so that the chart may be used for other general work.

The detailed steps for finding the moon age for a given date, e.g., 9.5.6-14-3, are as follows:

1. Take from the 5-tun chart the Long-Count date immediately preceding the given date, and transfer this with its moon age to a work sheet. E.g., 9.5.5-0-0, moon age 5 2/10.

2. Find the distance between these two dates by subtraction. E.g., 9.5.6-14-3 minus 9.5.5-0-0 equals 1-14-3.

3. Referring to the multiplication table at the side of the pages, select the highest multiple that does not exceed the remainder just found in Step 2. E.g., select 1-13-0 1/10 which is less than 1-14-3.

4. This highest multiple should be subtracted from the remainder found in Step 2. E.g., 1-14-3 minus 1-13-0 1/10 equals 1-2 9/10 (22 9/10 days). (This fourth step is a condensation of two arithmetical operations, and in effect gives us the distance that our given date lies beyond an intermediate date whose moon age is 5 2/10. With such a distance reduced to less than a month, it becomes hardly more than a matter of inspection finally to determine the moon age for our given date. The actual figure for the intermediate date does not appear in this solution as it has canceled itself out.)

5. To the remainder just obtained in Step 4 should be added the moon age from the 5-tun chart obtained in Step 1. E.g., 1-2 9/10 plus 5 2/10 equals 1-8 1/10 (28 1/10 days). This gives the unknown moon age desired for our given date. If this final answer exceeds 29 1/2 days, it can be corrected by the simple expedient of subtracting 29 5/10 days.

The computation on the work sheet appears as follows:

Given Date	9.5.6-14-3
1. 5-tun chart date	9.5.5-0-0 . . . of moon age 5 2/10
2. Remainder	1-14-3
3. Highest multiple	1-13-0 1/10
4. 2d remainder	1-2 9/10 (or 22.9 days)
5. Moon age from (1)	5 2/10 (or 5.2 days)
6. Desired moon age	1-8 1/10 (or 28.1 days)

After a little practice, only the last five lines need be written down as the first simple subtraction can be solved by inspection.

Hyphens are used here before the kin and the uinal so that tenths of days can be written decimal without causing confusion. This is after the manner of Teeple, but adopted solely for convenience in figuring and not as an interpretation of Maya thought as Teeple has used them. In the preceding explanation, I have used vulgar fractions to show tenths, but only for purposes of clarity. The user of these tables will almost certainly prefer to shift to decimals, and the use of hyphens will aid this.

A word should be added to explain the need of tenths of days in these computations, a seeming overrefinement where the probable error often exceeds a full day. For comparative work, this is necessary in order to avoid absurd results. For example, 1,294,106.4 minus 1,294,104.6 gives an interval of 1.8 days which is practically two days. If the decimal were ignored, we would round out the numbers to 1,294,106 minus 1,294,105 and obtain a difference of only one day.

TABLE OF MOON AGES AT 5 TUN INTERVALS

In planning this chart, I had a serious problem properly to correlate a series of new-moon dates 1771.836 days apart with the new-moon dates indicated by moon ages recorded in the inscriptions. The latter agree in only a general way with the results produced by an exact lunar calendar, sometimes varying three days or more either way from a table based on their average positions. Teeple attacked this problem from more than one angle, first favoring 9.16.4-10-9 as a new-moon date (Teeple 1925a, p. 114). At another time he favored 9.16.4-10-7 (Teeple 1925b, p. 549), but his final judgment was midway between the two, and he gives 9.17.0-0-0 as his preference (Teeple 1930, p. 53). This last is practically the same as a new moon at 9.16.4-10-8, the date which is thought to introduce the remarkable eclipse calendar of the Dresden Codex.

At present we can only guess at the reasons for the wide variations. Teeple reasoned that the records in the inscriptions were observational and affected not only by cloudy weather but even by the possibility that the observing priest's mind may have been clouded at times. Granting the plausibility of this, one cannot help wondering how to account for a spread as great as five or six days in recording as conspicuous a phenomenon as the first appearance of the new moon. When actual lunar conjunctions are compared with a table of average conjunctions exactly 29.5306 days apart, they are found to swing over a range of plus or minus 6/10 days from the average. To this swing should be added any lag due to conjunction hour preceding sunset hour by part of a day (Teeple mentions both items). By combining extreme positions for both of these factors, a maximum range of about 2.2 days can be obtained; and other astronomical variations and weather could probably increase it to three days. However, this is far short of the range of about five days necessary to include the bulk of data that need to be accounted for. Teeple's explanation looks probable, but does not dispel all doubts. However, no better hypothesis has been advanced.

[Roys then describes how he assembled the 108 new-moon dates known at that time in the inscriptions, calculated the expected new-moon position for each of them, and plotted the deviation shown by each against its Maya date. He found that the arithmetical average of the deviations after 9.9.15.0.0 was zero, but before that date the moon ages recorded in Glyphs D and E tend to be a day or more less than expected. He speculates on possible reasons for this (Roys 1945).]

In closing, I should explain that I prepared the first of these tables in 1931. At that time I believed that 9.16.4-10-9 was very close to a new-moon date, and I computed the table showing new-moon dates a day later than are shown here. The table of 1931 proved to be very workable and convenient and seemed to require no correction up to the present investigation. A number of copies were given to friends and consequently it should be noted here that computations made with the 1931 table will vary 1.0 day from those made with the accompanying tables. This is not a matter of importance except where comparative work is being done. It should, however, be noted that all the lunar computations published by Morley in *The Inscriptions of Petén* were based on my old tables, and are therefore a day off those which would be obtained with the present tables.

Long-Count Date	Day Count	Day and Month	Moon Age	Long-Count Date	Day Count	Day and Month	Moon Age	Multiplication Table of Lunar Months. (Maya numeration. Digits in the right-hand column are tenths of days.)
8.14.0-0-0	7Ahau	3 Xul	7.6	9.9.0-0-0	3Ahau	3 Zotz	14.2	1- 9 5/10
5-0-0	13Ahau	18 Zotz	6.3	5-0-0	9Ahau	18 Uo	12.8	2-19 1
10-0-0	6Ahau	13 Zip	4.9	10-0-0	2Ahau	13 Pop	11.5	4- 8 6
15-0-0	12Ahau	8 Uo	3.5	15-0-0	8Ahau	13 Cumhu	10.1	5-18 1
8.15.0-0-0	5Ahau	3 Pop	2.2	9.10.0-0-0	1Ahau	8 Kayab	8.7	7- 7 6
5-0-0	11Ahau	3 Cumhu	.8	5-0-0	7Ahau	3 Pax	7.4	8-17 2
10-0-0	4Ahau	18 Pax	29.0	10-0-0	13Ahau	18 Kankin	6.0	10- 6 7
15-0-0	10Ahau	13 Muan	27.6	15-0-0	6Ahau	13 Mac	4.6	11-16 2
8.16.0-0-0	3Ahau	8 Kankin	26.2	9.11.0-0-0	12Ahau	8 Ceh	3.3	13- 5 8
5-0-0	9Ahau	3 Mac	24.9	5-0-0	5Ahau	3 Zac	1.9	14-15 3
10-0-0	2Ahau	18 Zac	23.5	10-0-0	11Ahau	18 Chen	.6	16- 4 8
15-0-0	8Ahau	13 Yax	22.1	15-0-0	4Ahau	13 Mol	28.7	17-14 4
8.17.0-0-0	1Ahau	8 Chen	20.8	9.12.0-0-0	10Ahau	8 Yaxkin	27.3	1- 1- 3 9
5-0-0	7Ahau	3 Mol	19.4	5-0-0	3Ahau	3 Xul	26.0	1- 2-13 4
10-0-0	13Ahau	18 Xul	18.0	10-0-0	9Ahau	18 Zotz	24.6	1- 4- 3 0
15-0-0	6Ahau	13 Tzec	16.7	15-0-0	2Ahau	13 Zip	23.2	1- 5-12 5
8.18.0-0-0	12Ahau	8 Zotz	15.3	9.13.0-0-0	8Ahau	8 Uo	21.9	1- 7- 2 0
5-0-0	5Ahau	3 Zip	13.9	5-0-0	1Ahau	3 Pop	20.5	1- 8-11 5
10-0-0	11Ahau	18 Pop	12.6	10-0-0	7Ahau	3 Cumhu	19.1	1-10- 1 1
15-0-0	4Ahau	18 Cumhu	11.2	15-0-0	13Ahau	18 Pax	17.8	1-11-10 6
8.19.0-0-0	10Ahau	13 Kayab	9.8	9.14.0-0-0	6Ahau	13 Muan	16.4	1-13- 0 1
5-0-0	3Ahau	8 Pax	8.5	5-0-0	12Ahau	8 Kankin	15.0	1-14- 9 7
10-0-0	9Ahau	3 Muan	7.1	10-0-0	5Ahau	3 Mac	13.7	1-15-19 2
15-0-0	2Ahau	18 Mac	5.7	15-0-0	11Ahau	18 Zac	12.3	1-17- 8 7
9.0.0-0-0	8Ahau	13 Ceh	4.4	9.15.0-0-0	4Ahau	13 Yax	10.9	2- 0-18 3
5-0-0	1Ahau	8 Zac	3.0	5-0-0	10Ahau	8 Chen	9.6	2- 2- 7 8
10-0-0	7Ahau	3 Yax	1.6	10-0-0	3Ahau	3 Mol	8.2	2- 5- 6 8
15-0-0	13Ahau	18 Mol	.3	15-0-0	9Ahau	18 Xul	6.8	2- 6-16 4
9.1.0-0-0	6Ahau	13 Yaxkin	28.4	9.16.0-0-0	2Ahau	13 Tzec	5.5	2- 8- 5 9
5-0-0	12Ahau	8 Xul	27.1	5-0-0	8Ahau	8 Zotz	4.1	2- 9-15 4
10-0-0	5Ahau	3 Tzec	25.7	10-0-0	1Ahau	3 Zip	2.7	2- 11- 5 0
15-0-0	11Ahau	18 Zip	24.3	15-0-0	7Ahau	18 Pop	1.4	2- 12-14 5
9.2.0-0-0	4Ahau	13 Uo	23.0	9.17.0-0-0	13Ahau	18 Cumhu	.0	2- 14- 4 0
5-0-0	10Ahau	8 Pop	21.6	5-0-0	6Ahau	13 Kayab	28.2	2-15-13 6
10-0-0	3Ahau	8 Cumhu	20.2	10-0-0	12Ahau	8 Pax	26.8	2-17- 3 1
15-0-0	9Ahau	3 Kayab	18.9	15-0-0	5Ahau	3 Muan	25.4	3- 0-12 6
9.3.0-0-0	2Ahau	18 Muan	17.5	9.18.0-0-0	11Ahau	18 Mac	24.1	3- 2- 2 2
5-0-0	8Ahau	13 Kankin	16.1	5-0-0	4Ahau	13 Ceh	22.7	3- 3-11 7
10-0-0	1Ahau	8 Mac	14.8	10-0-0	10Ahau	8 Zac	21.3	3- 5- 1 2
15-0-0	7Ahau	3 Ceh	13.4	15-0-0	3Ahau	3 Yax	20.0	3- 6-10 7
9.4.0-0-0	13Ahau	18 Yax	12.0	9.19.0-0-0	9Ahau	18 Mol	18.6	3- 8- 0 3
5-0-0	6Ahau	13 Chen	10.7	5-0-0	2Ahau	13 Yaxkin	17.2	3- 9- 9 8
10-0-0	12Ahau	8 Mol	9.3	10-0-0	8Ahau	8 Xul	15.9	4- 0- 7 0
15-0-0	5Ahau	3 Yaxkin	7.9	15-0-0	1Ahau	3 Tzec	14.5	4- 4-15 6
9.5.0-0-0	11Ahau	18 Tzec	6.6	10.0.0-0-0	7Ahau	18 Zip	13.1	4- 5- 16 5
5-0-0	4Ahau	13 Zotz	5.2	5-0-0	13Ahau	13 Uo	11.8	4- 6-17 5
10-0-0	10Ahau	8 Zip	3.8	10-0-0	6Ahau	8 Pop	10.4	4- 7-18 4
15-0-0	3Ahau	3 Uo	2.5	15-0-0	12Ahau	8 Cumhu	9.0	4- 8- 7 9
9.6.0-0-0	9Ahau	3 Uayeb	1.1	10.1.0-0-0	5Ahau	3 Kayab	7.7	4- 9- 4 2
5-0-0	2Ahau	18 Kayab	29.2	5-0-0	11Ahau	18 Muan	6.3	4-10-13 7
10-0-0	8Ahau	13 Pax	27.9	10-0-0	4Ahau	13 Kankin	4.9	4-12- 3 2
15-0-0	1Ahau	8 Muan	26.5	15-0-0	10Ahau	8 Mac	3.6	4-13-12 8
9.7.0-0-0	7Ahau	3 Kankin	25.1	10.2.0-0-0	3Ahau	3 Ceh	2.2	4-14- 5 6
5-0-0	13Ahau	18 Ceh	23.8	5-0-0	9Ahau	18 Yax	.9	4-15- 2 3
10-0-0	6Ahau	13 Zac	22.4	10-0-0	2Ahau	13 Chen	29.0	4-16-11 8
15-0-0	12Ahau	8 Yax	21.0	15-0-0	8Ahau	8 Mol	27.6	5- 0- 1 4
9.8.0-0-0	5Ahau	3 Chen	19.7	10.3.0-0-0	1Ahau	3 Yaxkin	26.3	
5-0-0	11Ahau	18 Yaxkin	18.3	5-0-0	7Ahau	18 Tzec	24.9	
10-0-0	4Ahau	13 Xul	16.9	10-0-0	13Ahau	13 Zotz	23.5	
15-0-0	10Ahau	8 Tzec	15.6	15-0-0	6Ahau	8 Zip	22.2	

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